Trains ILLUSTRATED

Vol. VII DECEMBER, 1954 No. 12

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Vol. VII, No. 12 DECEMBER, 1954

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G. FREEMAN ALLEN

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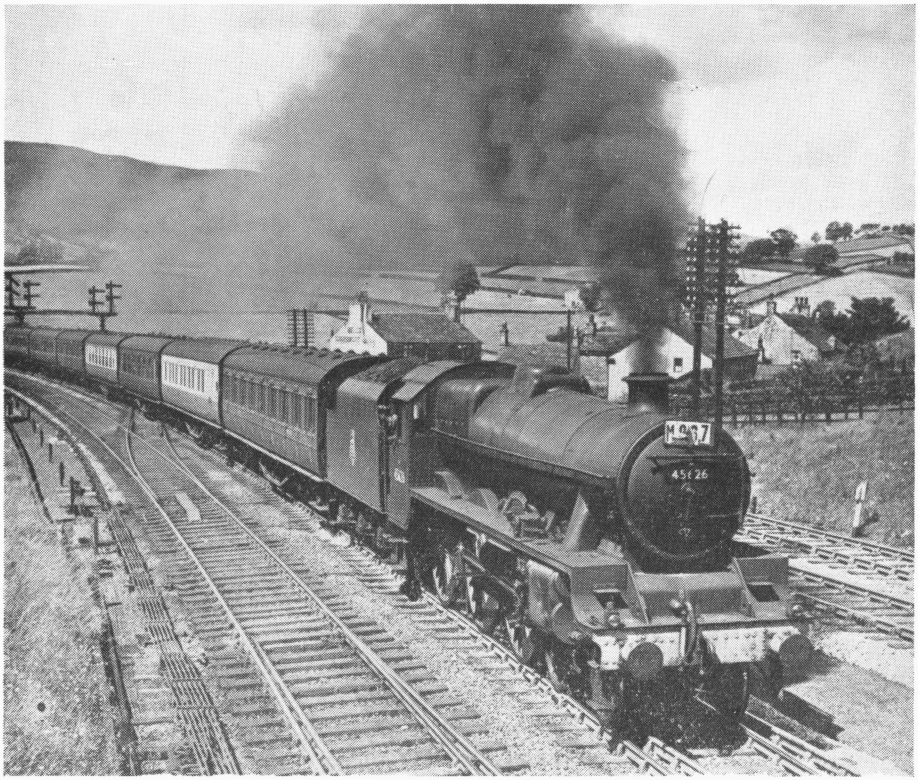


Above : CLIMBING TO THE PEAK FOREST, "Jubilee" 4-6-0 No. 45626 *Seychelles* makes staccato music as it attacks the 1 in 91 up to Chinley Junctions with the Saturday 1.35 p.m. Manchester (Central)-Nottingham. (4/8/51).
[*J. D. Mills*

Front Cover : STARCROSS RELIC—One of the old South Devon Railway atmospheric pumping stations stands between W.R. 4-6-0 No. 4088 *Dartmouth Castle*, heading for Exeter with an up express, and 2-6-0 No. 5360, pulling out of Starcross with a Kingswear local. (3/9/54).
[*J. F. Oxley*

TALKING OF TRAINS

THE EDITOR'S NEWS & VIEWS

Branch Line Closures

PASSENGER trains were withdrawn from the Uttoxeter-Buxton branch of the L.M.R. on November 1, and Tissington station was closed completely. Mr. E. A. Gurney-Smith writes that on the S.R. the long-standing threat to the single-line branch from Horsted Keynes to Lewes is now revived in earnest, and that there is also talk of closing the double track from St. Margarets Junction through East Grinstead (Low Level) to Horsted Keynes and Haywards Heath. The local people would appear to have only their disinterest to blame for the first proposal, but in the second the B.T.C.'s action is not so excusable. An unimaginative train service, distinguished by lengthy halts for obscure purposes and poor connections, has done much to drive the public on to already overcrowded roads, especially that from London to Brighton, which will become the only access to a popular coast for East Grinstead's planned population of 20,000 if the closure takes effect. Further east, Mr. I. Gotheridge writes that demolition of the East Kent Railway north of Eythorne was completed in October. The actual track between Shepherdswell and Eythorne has been relaid with bullhead in place of the old flat-bottom track, however, for these 2½ miles are still used anything up to 10 times a day by a Dover Class "O1" 0-6-0 making trips to Tilmanstone Colliery, one of the four pits out of the original eleven in Kent which are still working. Passenger services were revived on the Kent & East Sussex Railway this summer, writes Mr. S. C. Nash, for a few hop-pickers' trains were run between Robertsbridge and Bodiam; a few continued to Northiam for the engine to turn round its train, but this was not necessary with the heavier trains, which set out with an engine at each end. Finally, Mr. R. C. Ludgate writes from Ireland that all services on the 14½-mile narrow gauge line from Londonderry to Strabane, owned by the U.T.A. but operated by the County Donegal Railways Joint Committee, are to be withdrawn on January 1 next, thereby closing the last narrow-gauge railway operating wholly in Northern Ireland; and Mr. J. Emslie tells us that the Scottish Alloa-Alva trains were axed on October 3, and the Beattock-Moffat service is to be closed on December 4.

Week-end Fares

WE are delighted to hear that a cheap fare scheme of a type we have long advocated is proving highly successful in Scotland. Week-end return fares were experimentally introduced in the North of Scotland last summer, and the public response was such that from October 1 they were introduced elsewhere in the Region. These new tickets are considerably cheaper than the ordinary return fare—27s. from Glasgow to Aberdeen and back, for example, against 44s. 8d.—and are available for outward travel by any train after 3 p.m. on Friday and all day Saturday, and for return by any train on Saturday, Sunday or Monday. We hope that other Regions will take careful note of this venture and its outcome. During the summer it might well create more traffic than the railways could handle on the most popular routes and deprive the railways of existing revenue. In winter, however, there are many routes carrying sparsely filled trains where the ordinary fares have little hope of attracting new week-end travellers out of doors: or, if the average family does decide on a jaunt to friends or relatives, of competing with cheaper buses. This is a case where a cheap fare can attract new traffic that would otherwise stay at home to services that can accommodate it without overcrowding: where it will not deprive other services of their revenue (as, for example, the "Starlight Specials" tend to do): and, even if it does not itself show a handsome profit, certainly will not lose money and will create immense goodwill and railwaymindedness.

Going Down

PRESENTING to the Press the B.T.C. Report and Accounts for 1953, the Commission's Chairman, Sir Brian Robertson, stressed the importance of early approval for a maximum railway freight charges scheme, so that under the dispensation of the 1953 Transport Act the railways can bid for traffic on competitive terms. His words are underlined by the latest figures of British Railways' traffic to be released. There is always a seasonal decline in freight during the summer months, but this year it was worse than ever, the total being near 9.7 per cent below 1951. The amount of coal and coke

carried by the railways from mid-July to mid-August was the smallest in any similar period since 1948, while mineral traffic in general was 9.4 per cent down on last year ; merchandise and livestock was 8.4 per cent below the figure and as much as 17 per cent below that of 1951. Worst hit were the London Midland and Western Regions, which hauled 10 and 9 per cent less ton-miles respectively than in 1953.

875 miles in 810 minutes

IN case we are in any danger of complacency about the revival of high-speed running in this country, a Canadian friend sends us details of a recent and quite average journey from Chicago to Minneapolis and back on the Burlington Lines, U.S.A., outward by the " Morning Zephyr " and inward by the " Afternoon Zephyr." The train service between Chicago and the Twin Cities of Minneapolis and St. Paul is, of course, one of the show-pieces of American rail travel and was vividly described by " Quicksilver " in a contribution to *Trains Annual*, 1954. There are three competing routes, the Chicago & North Western, the Milwaukee and the Burlington, varying from 408½ to 427 miles in length between Chicago and St. Paul, which between them put on eight diesel-hauled streamliners each way daily. Four of these trains average 68.3 m.p.h. over the whole distance, *eight stops included*, and only one averages less than a mile a minute throughout, largely because it makes 16 intermediate halts. The " Zephyr " service on which our correspondent travelled is perhaps the most interesting of them all. It is one of the 68.3 m.p.h., eight-stop trains in both directions, but the same train provides both outward and inward services in the day with a pause of no more than half an hour at Minneapolis. Leaving Chicago at 8.45 a.m., you are back in that city at 10.45 p.m., after a round journey of 875 miles. As " Quicksilver " remarked in his *Trains Annual* article, an exact parallel to this would be if the " Flying Scotsman," leaving King's Cross at 10 a.m., were to call at Hitchin, Peterborough, Grantham, Doncaster, York, Darlington, Newcastle and Berwick, reach Edinburgh at 3.45 p.m., return south at 4.15 p.m., make the same stops, and regain King's Cross by 10 p.m. What speeds are usual on the " Zephyrs " ? On the run described, with a 9-car train of 600 tons headed by a 4,000 h.p. diesel twin-unit, pass to pass average speeds of over 94 m.p.h. were recorded on sections of 37½ and 40 miles, 90-91 m.p.h. on others of 40, 23½ and 22½ miles and 89 m.p.h. on one of 31 miles in length. Most remarkable is the fact that, except for the first 38 miles out of Chicago, the Burlington route is all single track.

It must have been black

A RECENT issue of the *British Railways (L.M.R.) Magazine* tells the extraordinary story of a kitten's journey from Crewe to Perth. When Pacific No. 46234 arrived on Perth shed after working the 11.13 p.m. from Crewe, the animal was discovered, covered with oil, on an axlebox beneath the engine. Presumably it had crawled there before the engine left Crewe and had been too frightened to attempt an escape while the engine was in motion. Cleaned and fed after its hazardous journey, it seemed none the worse !

A MERRY CHRISTMAS

is the greeting with which we traditionally, but none the less sincerely, close another volume. To judge from the many commendatory letters you have enjoyed this year's issues as much as ever—certainly our circulation figures are, we believe, setting new records for a British railway periodical. We are grateful to the stalwarts who have continued their contributions, from writers of feature articles and photographers to the faithful readers who make " Motive Power Miscellany " such a valuable record. We have been delighted to welcome new friends, especially Mr. Hamilton Ellis, whose reminiscences have been gratifying so many. Next year we add another expert to our " panel," a well-known former top-link driver of Haymarket, whose pungent comments on railway and especially locomotive matters, from the practical railwayman's viewpoint, will appear regularly. His pen-name of " Toram Beg " needs no introduction to most readers. For 1955 we are not enlarging the page total of each issue, as we did in 1953 and 1954, since for 1956 we are contemplating —but not yet promising—a very considerable change, the increase of our page size. Are you in favour of a larger T.I., or do you prefer a pocket magazine ? We should be grateful for your opinions and for any views on our contents. Are there features you would like extended or discontinued, subjects in which you are interested which we do not yet deal with ? Let us hear from you in 1955, for which we extend to British Railways and all our readers best wishes for

A PROSPEROUS NEW YEAR

Christmas is planned in September —ON BRITISH RAILWAYS

SOON after you have read this issue, many of you will be packing up for a Christmas week-end away from home or booking an hour or so by the lineside to watch the extra holiday traffic. But perhaps you are one of those morose characters like us, who wait till the holiday is almost upon us before we give it a thought or sniff the air in search of a little festive spirit. Such types would get short shrift on British Railways. Last Christmas week we were at Euston and discovered that the District Operating Superintendent and his staff had sat down to discuss Christmas in September, before the last of the summer holiday-makers had passed through Euston. By the middle of November Euston's Christmas programme had been signed, sealed and delivered to the Operating staff.

The first job had been to turn up the records of the last year in which Christmas fell on a Friday, as it did in 1953. The pattern of Christmas travel varies little over the years and, although the Commercial Department keeps its finger on changing trends of travel and modifies its programme to suit, the programme for the last similar Christmas week was a suitable basis for the 1953 holiday. The affluent began their Christmas vacation on the previous Sunday, when 8 additional trains were booked out of Euston ; only 6 were booked for the Monday and 9 for the Tuesday, but then the extra traffic surged to its peak with 28 additional trains time-tabled for the Wednesday and 31 for the Thursday. A similar number of extra workings, naturally, were booked into Euston, but these were the brain-children of the staffs in the Districts from which they originated.

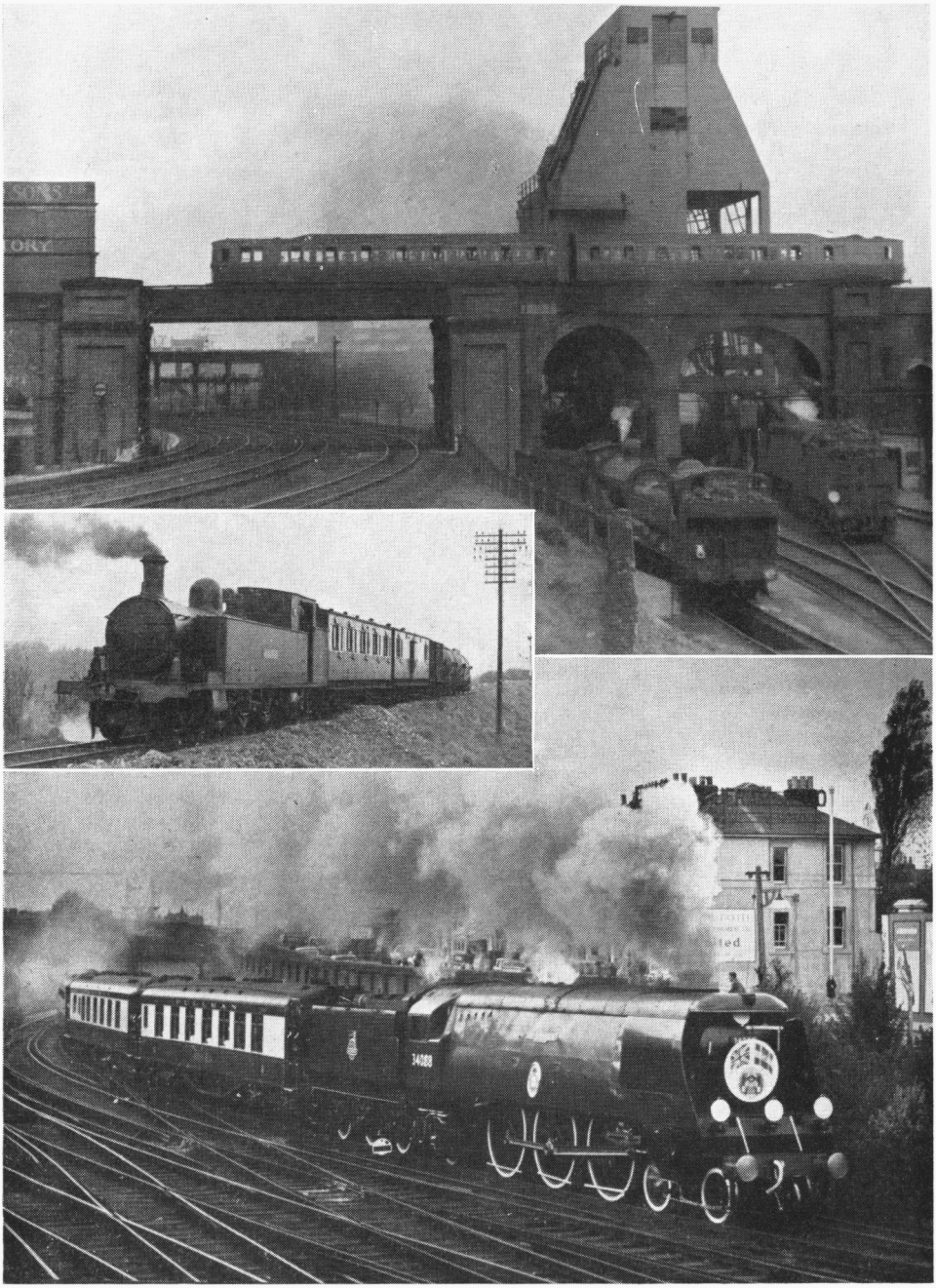
Of course, the public may not "play" as the planners have a right to anticipate, and here one good guide at holiday periods is the seat reservation department. The provident begin to book their seats on the Christmas trains as early as September, too, and as time goes on the authorities begin to see whether all the extra trains they have planned will be needed, whether some services have been insufficiently catered for, whether some have been overdone and were better pruned. No train is ever fully booked, by the way ; as soon as two-thirds of a train's seating accommodation has been reserved, the books are closed and, providing it has been decided to extend reservation facilities to them, further requests for bookings are referred to extra trains.

Christmas is a busy time for the restaurant car authorities, too, and at an early stage of the planning the Commercial Department will go into consultation with the Operating Department and the catering side to settle the distribution of restaurant cars to the best advantage. So far as possible, the extra cars will be allocated to the additional parts of trains which normally carry them—and here it might be as well to underline the distinction between the two types of extra train. First of all, there is the division, or additional part of a regular train, which is a carbon copy of its parent and makes the same stops ; it should therefore include the same refreshment facilities as its parent, if possible. The relief train, on the other hand, although it is usually related to some service in the normal time-table, does not necessarily make the same halts or even conclude at the same destination. For example, we have noticed that on the last week-night prior to a Bank Holiday week-end the Southern usually puts on a service to Ilfracombe in connection with the 6 p.m. from Waterloo, which the public time-table restricts to the Plymouth line beyond Exeter.

For the special trains Euston was originating, 568 extra vehicles were required. As Christmas week progressed, naturally most of these would be found from incoming extras from the provinces, for which the coaching stock controllers would devise suitable balancing workings in the outward direction. To start the ball rolling, however, 161 were to be withdrawn from the L.M. London district's open-air "depot" at Verney Junction, where long lines of older stock are stored between holiday periods. Towards the end of November these vehicles were checked by examiners from the Carriage & Wagon department for mechanical safety and then, early in December, hauled up to Willesden in 20-coach rakes for cleaning.

Amongst its other jobs, the Motive Power department had to set aside engines to steam-heat these vehicles in the few days prior to their use, to get rid of the damp resulting from their long sojourn in the open. Provision of engines for the additional trains had been catered for by the Motive Power Control at Crewe, which had devised the necessary additional diagrams as soon as all the plans were laid by the individual districts.

Mail is an exceptional item to be considered at the Christmas holiday, but at Euston the pressure is relieved by transferring all parcels to Maiden Lane goods



NEWSREEL **Top :** At the end of October the last of the ex-L.B.S.C. "2-SUB" electric units were withdrawn from the Wimbledon-West Croydon line and replaced by new "2-EPB" units ; similar units on the South London line, of which one is seen here at Stewarts Lane on the 2.17 p.m. London Bridge-Victoria working, were replaced on 20/9/54, the day after this picture was taken. On the flattened roof above the driving compartments was mounted the cars' original overhead current collection equipment. [*J. J. Smith*

Inset : The Londonderry-Strabane narrow gauge service is to be closed (*see page* 494) ; here 2-6-4T No. 2 *Blanche* approaches Strabane. [*H. C. Casserley*

Bottom : S.R. Pacific No. 34088 213 *Squadron* leaves Portsmouth & Southsea on 14/10/54 with the Pullman train conveying the Emperor of Ethiopia to London. (*see page* 535). [*P. C. Short*

depot over the Christmas period, and keeping the latter installation open continuously for a fortnight to deal with it. Another interesting change is that the 8.30 p.m. "West Coast Postal" and the 10.50 p.m. "North-West Postal" are divested of parcels traffic at this time to make room for the additional letter traffic. The pick-up vehicles, too, are taken off the trains and storage vehicles substituted. One or two other mail trains originating from Euston are extended to different destinations from their normal run, but otherwise no extra trains are started from the terminus.

Right down to the last minute the plans are capable of modification to meet last-minute changes of circumstance. On Euston platforms the District Operating Superintendent's inspectors are watching the loading so that, if any of the additional trains show signs of being so lightly loaded as to be uneconomic, they can, with the D.O.S.'s authority, be cancelled up to about the last half-hour before departure is scheduled ; alternatively, if any service is heavily overloaded, steps will be taken to organise a last-minute additional train, provided that the traffic has not reached saturation point in line capacity already, as would be the case with the Thursday and Friday programme of Christmas week.

At Camden, the motive power superintendent will be exercising his initiative to keep the traffic moving ; for in winter, when fog is a persistent threat, the best-laid plans can go awry and engines may be arriving too late to take up their booked return workings. Rosters may have to be altered on the spot, in consultation with Euston, for once an engine and crew have left shed they are the Operating Department's responsibility ; moreover, you cannot turn out a crew for a job to Preston if they only know the road as far as Crewe, or suddenly roster them to Birmingham if that means their normal return job from Manchester is going to be left without a crew. If you are turning out to watch the Christmas extras this brief *résumé* of operations at Euston may help you to picture some of the complicated work that has gone to putting them on the road.

THE B.T.C. REPORT

British Railways

IN 1953

A FINAL net surplus of £4.2 millions, after meeting central charges, was reported in the British Transport Commission's Annual Report and Accounts for 1953.* This surplus compares with one of £4.5 millions in 1952 and £0.1 millions in 1951, and reduces the accumulated net deficit since 1948 to £27.3 millions. The actual working surplus for 1953 was £59.4 millions, and the traffic on most of the carrying services was greater than in the previous year. So far as British Railways were concerned, passenger receipts increased from 1952 by £2.9 millions to nearly £114.8 million and freight receipts by £15.1 millions to £301.6 millions, both as a result of higher rates. Unfortunately every type of working expense was increased by comparison with 1952, the total rising by £22.6 millions to £386.3 millions, so that net receipts were reduced by £4 millions.

The Report begins with an emphasis on the change in the Commission's function as a result of the 1953 Transport Act. Its charge under the 1947 Act to provide the country with an "integrated" national transport service, implying an obligation to "take the rough with the smooth," has been nullified by the decision, for example, to re-admit private hauliers into long-distance road transport. In the more competitive economic climate to which the 1953 Act moved transport, says the Report, the B.T.C. cannot be expected to maintain facilities permanently incapable of earning their keep at any level of charges which the public are willing to pay. On the other hand, in presenting the Report, the B.T.C. Chairman, Sir Brian Robertson, after appealing to Parliament for a period of stability in transport affairs, observed that when this was secured they were fully prepared to meet competition "without kid gloves." Here he was referring to the change in statutory control of railway charges embodied in the 1953 Act, which abolishes the necessity for equality of freight charging by the railways, enabling them to bid freely and competitively for traffic subject only to maximum rates. A maximum charges scheme will shortly be presented to the Transport Tribunal for approval.

The Report and Accounts run to 329 pages in all, so that we can here summarise only the items of particular interest to railway enthusiasts :

● **STAFF**

British Railways' staff (including collection and delivery services) declined by 7,204 to 593,768 during the year. Most serious were the losses of over 2,000 men each in the motive power and civil engineering departments. Increases in wages to B.R. staff during the year cost over £5.9 millions.

● **CAPITAL DEVELOPMENT**

Continued limitations on capital investment, shortage of materials and further reparation of war-

* Vol. I (Report), H.C.268/1, 3s. 6d. ; Vol. II (Accounts), 6s. 6d. ; both published by H.M.S.O. A digest of both volumes, *British Transport*, 1953, is available from the P.R.O., B.T.C., 222 Marylebone Road, London, N.W.1, price 1s.

time dilapidations unhappily still prohibited progress with the now vital schemes of railway modernisation. In the hope that these would soon be permissible, however, the B.T.C. was considering (*a*) electrification of the King's Cross suburban lines, (*b*) new estimates for completion of the S.R. scheme to eliminate steam traction east of a line from Reading to Portsmouth, which it is believed will cost £34 millions, and (*c*) electrification of certain routes in the Glasgow suburban area, comprising the Queen Street (Low Level) lines from Helensburgh to Airdrie and branches ; and the lines from Glasgow Central round the Cathcart Circle with branches to Neilston (High) and Kirkhill.

● BRANCH LINE AND OTHER CLOSURES

Route mileage approved for closure as unremunerative in 1953 totalled 241, bringing the total closed since 1948 to 1,778¼ and the total route mileage in use down to 19,222 miles. (All B.R. track, including sidings, totals 51,608 miles.) During 1953 76 B.R. passenger stations and four motive power depots were closed, making totals in use 5,866 and 388 respectively.

● LOCOMOTIVES

During 1953, 208 new locomotives costing £4.1 millions were put into traffic, against a programme of 282, which was not met mainly because of steel shortage ; 426 locomotives, representing a book value of £1.1 million, were withdrawn during the year, making a total stock of 18,966 locomotives at the year's end.

● COACHING STOCK

The Government's refusal to allocate adequate steel for coach-building in 1952 was still felt. At a cost of £9.8 millions, 1,136 coaching stock vehicles were built in 1953, but this was below the target figure. The total of all-steel standard coaches in service was thus only 1,774. At the year's end, accumulated arrears on the building programme amounted to 3,627 vehicles, which it was hoped a much higher rate of production in 1954 would do something to reduce. Total of B.R. passenger-carrying vehicles, steam and electric, dropped by 119 to 41,762. This included 699 steam stock refreshment cars and 440 sleeping cars. There was a heavy demand for sleeping car berths during the year and at some peak week-ends all spares were in service.

● WAGONS

Restricted steel supplies also kept new wagon-building to a total of 40,820 costing £21.2 millions, which was 12,000 wagons below building capacity. The output included 650 of the new 24½-ton mineral wagons, the largest capacity possible on four wheels in Britain ; this type, though convenient on many services, cannot be accepted in most collieries and ports, a fact which convinces the B.T.C. against demands from some sources for larger bogie wagons.

● LONDON TRANSPORT

At the end of 1953 the Government encouraged the B.T.C. to prepare estimates for the possible construction of the Route "C" tube proposed by the London Plan Working Party Report of 1949, to run from Walthamstow through Tottenham Hale, Finsbury Park, King's Cross, Euston, Oxford Circus, Victoria, Chelsea and Fulham Broadway on to the existing District and S.R. lines to Wimbledon. Cost of the new tube is put at £50 to £60 millions.

● DIESEL MULTIPLE-UNIT TRAINS

The B.T.C. has decided to make a substantial investment in diesel multiple-unit trains of different types, which will lead to a wider use of them here than on any other railway system in the world. One reason for the B.T.C.'s policy is that this form of modernisation can be achieved more quickly than electrification in present circumstances. For the heaviest density of passenger traffic, electrification will probably always retain an advantage ; but for many important services, and in particular for cross-country routes, the diesel multiple-unit train combines the advantages of both steam and electricity. The original conception of a diesel railcar as a branch-line "bus on rails" has been discarded, says the Report, because even a diesel would not stimulate adequate traffic on most rural branches threatened with closure ; hence to-day's emphasis on multiple-unit trains. Nevertheless, the Watford-St. Albans branch has been selected as a testing-ground for trains of lightweight four-wheel diesel cars.

● AUTOMATIC TRAIN CONTROL

The prototype standard A.T.C. apparatus introduced on the E.R. has been modified to stand up more reliably to the heavy duty required of it. However, the B.T.C. feels that it would be unwise to give its general installation absolute priority over all other signalling improvements, such as track circuiting, better block control and colour-light signalling. (In his report for 1953, the Inspecting Officer of the Ministry of Transport reveals that the standard A.T.C. is to be extended to the whole of the East Coast main line between King's Cross and Grantham.)

● CATERING

Restaurant cars showed a deficit of £648,710 on the year's working, during which over 10 million meals were served, compared with one of £471,790 in 1952, mainly owing to higher running costs ; it is hoped that the new style of cafeteria car will do much to offset this. Hotels showed a loss, against a profit in 1952, and refreshment rooms a reduction in profit of some 40 per cent. Total deficit of the Hotels and Catering Department was therefore over 300 per cent worse than in 1952, and was running at nearly £500,000.

● PASSENGER SERVICES

There was a slight increase in coaching train miles, especially on the W.R., but there was a decrease of 0.7 per cent in the number of passenger journeys outside London (in the London area itself, about which the B.T.C. is particularly worried, it was 1.2 per cent). The average length of journey was greater, however, to the Commission's satisfaction, for long distance traffic appears to produce the most favourable net financial results ; the B.T.C. therefore refrained from increasing long-distance fares.

● FREIGHT SERVICES

In total, more freight tonnage was carried in 1953 than 1952, except on the N.E.R., owing to a continued increase in mineral traffic (now ended), which was, however, offset by a continued decline in merchandise. The average length of haul increased, except for minerals. Most important, the figure of net ton miles per engine hour went up yet again, to 619, an improvement of about 34 per cent on 1938. The best figures were those of the N.E.R., carrying 759 tons per engine hour. Experiments with brake-fitted mineral trains of different types continued, aimed at the all-important goal of raising average freight train speeds ; the cost of equipping all B.R. wagons with continuous brakes was put at £35 millions in 1950. A suitable coupling for such trains is also being sought. Another urgent requirement is the replacement with oil-lubricated vehicles of the remaining 162,000 grease-lubricated wagons, which offer more rolling resistance than modern types and are often erratic runners, particularly in cold weather. The B.T.C. is also studying long-term plans, involving new junctions and connections, for re-routing more cross-London freight traffic to avoid congested junctions and sections of line.

● TRAIN OPERATION

Owing to higher coal prices and wages, train operating costs were up by 4 per cent ; fuel accounted for 36 per cent of the total cost (it is interesting to note, by the way, that the cost of fuel per steam engine mile works out at about 1s. 7½d., and of current per electric train mile at about 1s. 11d.). But for further economies in operation, however, the increase would have been higher ; for example engine hours in traffic were kept down to an increase of only 0.1 per cent for coaching work, against a train miles rise of 0.9 per cent ; while on freight duty engine hours were *reduced* by 0.7 per cent, against an increase of 0.5 per cent in train miles. The figure of train miles per engine hours also went up by 1 per cent. That there is still some room for further improvement seems to be suggested by the fact that the S.R. could reduce its percentage of light engine running or engines "assisting not required" to 3.6 per cent of total engine mileage, compared with an all-line average of 7 per cent.

The Greenock (Princes Pier) Line

by W. A. C. SMITH

THE Glasgow (St. Enoch)-Greenock (Princes Pier) line was at one time of considerable importance, as it formed part of the Glasgow & South Western Railway route to the Clyde coast. During the last war, too, it played a vital part in the Battle of the Atlantic. To-day the pier is no longer used by the railway steamers, and the branch is worked only by a local service, serving mainly the residential districts of Bridge of Weir and Kilmacolm. A fair amount of goods and cattle traffic is handled, together with liner specials, while the Princes Pier line has been used in emergencies for coast traffic when its erstwhile rival, the Gourock line, has been blocked. Although shorter than the latter, the Princes Pier line is a much more difficult proposition. Between Cart Junction and Greenock its profile is shaped like a vast gable, rising for 9 miles mainly at 1 in 80 or 1 in 101 to the summit near Upper Port Glasgow and then dropping for 5¾ miles at 1 in 98-70.

The branch leaves the Glasgow-Ayr line at Elderslie. To reach this point Princes Pier trains can use either the former joint line, via Paisley (Gilmour St.) and mainly four-track, or the alternative Canal route, which is half a mile longer and abounds in sharp curves, since originally its route was that of a canal. Both are easily graded and converge at Elderslie No. 1 Junction. At the No. 2 box (10.1 miles from St. Enoch by the joint line) the Greenock line drops sharply at 1 in 80 for half a mile to Cart Junction, where the connection from Johnstone curves in on the left and the relief Ayr loop, which runs along the north side of Loch Winnoch, diverges. The Princes Pier line then crosses the River Cart and begins its long climb.

The gradient is 1 in 80 for three-quarters of a mile from the former Clippens Junction, where a mineral siding has been removed. There is a glimpse of the mighty peak of Ben Lomond away on the other side of the Clyde valley before we reach the country station of Houston & Crosslee (11.8 miles), which also serves Brookfield. Upward the train still grinds on 1 in 80, broken by a short level stretch, across pleasant undulating countryside, to the busy little town of Bridge of Weir (13.8 miles), where the gradients ease. There is a modern brick signalbox here, water columns and a quite large goods station. A brief patch of 1 in 93 enlivens the restart across the River Gryfe, and past the extensive buildings of the Orphan Homes of Scotland.

Now the train has begun the rather dreary climb up Strath Gryfe, with misty and bleak moorland away to the left. The gradients vary between 1 in 140 and 1 in 260 at the start, then culminate in 1½ miles of 1 in 100 to the rock cutting approaching Kilmacolm (17.4 miles), a residential resort, boasting a hydro, in the Renfrewshire uplands. The town has a fine, glass-roofed station, with sandstone buildings, which is famous for its floral decorations.

From Kilmacolm the long climb is resumed through the deserted hills at a steady 1 in 101 to the summit, m.p. 19. Then, as the train swings out of a cutting, a magnificent panorama of the Firth of Clyde is opened up as the train follows the contours of the hills in a curving descent to the huddled houses and shipyards of Port Glasgow and Greenock below. Half a mile beyond the summit is Upper Port Glasgow. At the moment this is no more than a signalbox, a goods platform and a couple of sidings, but the spread of new housing schemes in this area has aroused demand for a passenger station. From the summit the line drops at 1 in 98 for 2½ miles, followed by a very brief 1 in 152 and 1 in 90, and then 2 miles at 1 in 70 to Greenock (Lynedoch).

At the approach to Greenock, the "sugar and ship town," the railway is carried over a deep ravine on a viaduct and then crosses the Wemyss Bay line. Tunnels are threaded and at the approach to Lynedoch is Cartsburn Junction, where the steeply-graded branch to the docks and Inchgreen goods station diverges. The latter branch parallels the Wemyss Bay line for a while and then crosses the Gourock line at the east end of Ladyburn shed. Lynedoch station (23.9 miles), a rather dilapidated wooden structure, is on a sharp curve and there is a big goods yard on a lower level controlled by Mearns Street Junction box. The Princes Pier line continues its descent thereafter in a succession of tunnels beneath the town, still at 1 in 70, except for two short breaks at 1 in 250 and 1 in 225 until, a quarter of a mile outside Princes Pier, the gradient eases to 1 in 300 past the locomotive shed, over the main road and into the terminus (25.5 miles, or 26 miles via the Canal loop).

Princes Pier station has two platforms with four tracks and a short glass roof. There are no crossovers and the usual practice is for the stock of each arrival to be drawn out by the engine of the next departure. At the seaward end stairways

lead down to the pier and at either side are curved passageways, one of which is fitted up for Customs examination. Entrances at the south end of the platforms, which give convenient access from the town, are now disused.

The Princes Pier line had its origin in the Bridge of Weir Railway. In 1845, the year of the railway mania, a provisional committee of what was called the Ayrshire, Bridge of Weir & Port Glasgow Junction Railway issued a prospectus for a line to run from the Glasgow, Paisley, Kilmarnock & Ayr Railway along a path close to the town of Johnstone, serving Houston and Bridge of Weir, and finally connecting with the Glasgow, Paisley & Greenock Railway at Port Glasgow. The Bill for the formation of the company was passed by Parliament in July, 1846, but the concern collapsed a few years later.

However, a popular movement for a railway was fostered by local landowners, and on October 22, 1861, a meeting was held in Glasgow and a plan for a line from Johnstone to Bridge of Weir, costing £25,000, was approved. Negotiations were opened with the Glasgow & South Western Railway, which soon promised to work the line on liberal terms, and subscribed £8,000. The Bridge of Weir Railway Act was passed on July 7, 1862. Construction of the line commenced immediately, but proved more difficult than anticipated, while the Board of Trade Inspector was not easily satisfied ; thus the railway was not opened for goods traffic until April 25, 1864, and for passenger traffic on June 20 of the same year. It was single track and there was one intermediate station named Tweeniehills (situated about three-quarters of a mile west of the present Houston & Crosslee station) ; this was probably never used, as the Board of Trade Inspecting Officer was not satisfied that it could be worked safely, since it stood on a gradient of 1 in 58. The Bridge of Weir Railway was worked by the G. & S.W.R. and was amalgamated with that company on August 1, 1865.

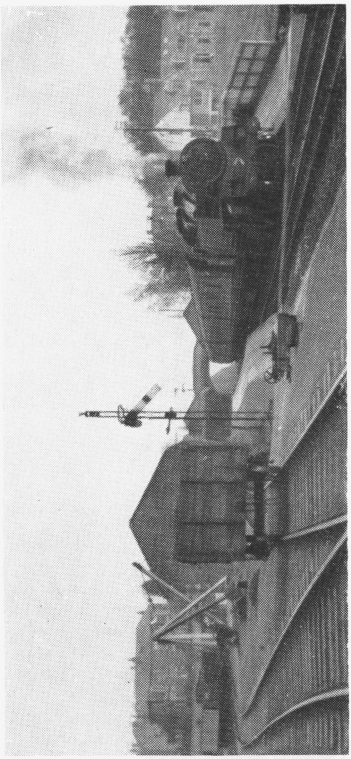
The Greenock & Ayrshire Railway may be regarded as an extension of the Bridge of Weir line. Greenock merchants and Kilmarnock colliery owners lent the scheme powerful support and a Bill for its formation was passed on July 5, 1865, empowering the company to build a line from Clyde Crescent, Greenock, to the G. & S.W. with a connecting line to the Albert Quay at Greenock and to the Bridge of Weir Railway. Though ostensibly an independent undertaking it was for all practical purposes part of the Glasgow & South Western and gave this company an outlet on the upper Firth. The G. & S.W.R. undertook to work it when completed and to receive 30 per cent of receipts for working expenses, since the G. & S.W. had obtained powers, also in 1865, for the construction of a line from Elderslie to the Bridge of Weir line at Cart Junction. It was planned that the G. & A.R. should be completed early in 1868. The Greenock contract was let to a Mr. Young for £114,000 and that for the Bridge of Weir to a Mr. Hugh Kennedy for £128,000.

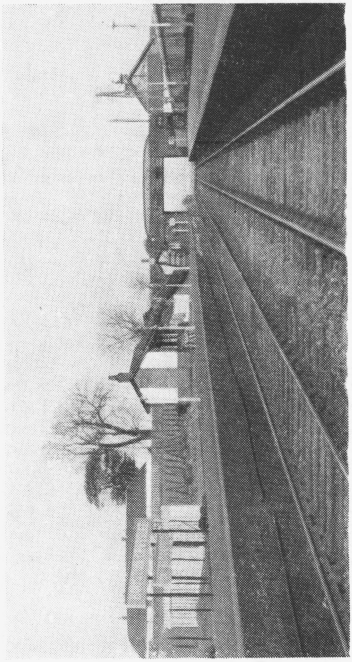
Difficulties arose over the question of the Company's access to the new steamer quay at Greenock and a Bill for a station at the quay and a branch to Gourock was defeated through the opposition of the Caledonian Railway. Ultimately an agreement was entered into and the Greenock & Ayrshire obtained powers to construct new lines in connection with the quay and Albert Harbour. The Bridge of Weir Railway was closed on May 18, 1868, and a temporary bus service was provided from Johnstone to allow its track to be doubled and relocated as part of the Greenock & Ayrshire line ; the passenger terminus at Bridge of Weir was closed permanently and a new station was provided on the through line. The works on the route proved heavier than had been anticipated, and the Greenock & Ayrshire was not opened for mineral traffic until September 1, 1869 ; on October 1 it was available for goods traffic, and on December 23 for passenger traffic. It was worked by the G. & S.W.R. and was vested in that Company from August 1, 1872. The block system was introduced on the Greenock & Ayrshire Railway at its opening and was gradually extended to the remainder of the G. & S.W. system.

Houston & Crosslee station was opened on April 3, 1871, as Crosslee, and did not finally assume its present name until 1926. The name of Kilmalcolm was changed to Kilmacolm to emphasise its connection with St. Colm ; the alteration appeared in the time-tables from June, 1905.

The Greenock & Ayrshire Railway terminus at Greenock was the Albert Harbour station, a wooden structure with an island platform some 200 yds. long. Following the opening of a new pier, named Princes Pier and owned by Greenock Harbour Trust, the G. & S.W.R. took steps in February, 1874, to construct a covered way from the Albert Harbour station to it. This gave the G. & S.W. a much superior place of embarkation for passengers from Glasgow bound for the Clyde coast than that used by the Caledonian, and soon attracted the bulk of the steamer traffic. On May 1, 1875, the name of Albert Harbour station was changed to Princes Pier.

In 1889 the Caledonian opened their new extension from Greenock to Gourock





PRINCES PIER LINE STATIONS—**Left:** Houston & Crosslee. **Right:** Kilmacolm. Class "4MT" 2-6-4T No. 80025 has just arrived with a train from Glasgow (St. Enoch) and is pulling out to run round its stock. (21/4/54). [*G. H. Robin*

and fierce competition ensued between the "Caley," "Sou' West" and the North British. There was racing between the rival steamers and a progressive slashing of train times. On May 25, 1894, a new pier and station buildings, fronting on to the quay, were formally opened at Princes Pier. These still form an impressive if somewhat shabby edifice, for although of wooden construction, they are faced with red tiles and graced by four square towers.

Four years later, in 1898, the G. & S.W.R. purchased Largs pier and intended to develop it as a railhead by building a branch line from Kilmacolm; this would have cut out the long detour through Kilwinning to Fairlie and allowed them to compete with the Caledonian steamers operating from Wemyss Bay, but owing to numerous objections, the chief of which was to the building of the railway along the sea front, the project was turned down by the House of Lords.

Early in the present century the G. & S.W.R's policy was to concentrate on long-distance residential travel with semi-fast trains, rather than suburban traffic in the Glasgow area, which had been captured by the tramways, and the Princes Pier line was provided with business expresses from Kilmacolm and Bridge of Weir in addition to the steamer trains. These two stations also helped to earn the G. & S.W.R. its title of "The Golfers' Line." The schedule for one-stop boat trains, such as the 10.5 a.m. down and 8.25 a.m. up, was 42 minutes, while residential services included the 8.45 a.m. from Kilmacolm and the 5.45 p.m. from Glasgow (non-stop to Bridge of Weir). On summer Saturdays, notable additions were the 1.53 and 1.58 from St. Enoch, which were non-stop, and the 1.55, which started from Paisley. There was also a Sunday service.

In the old days 4-4-0s were the mainstay of the Princes Pier line, although four 0-4-4 tanks were built in 1879 to the design of James Stirling to replace the 2-4-0s, which had worked it since its opening. However, tank engines were unpopular on the G. & S.W.R., and this quartet was soon relegated to Glasgow suburban trains.

From 1882 to 1885 the "119" Class, the famous "Wee Bogies," emerged from Kilmarnock works. There were 22 of these 4-4-0s, designed by Robert Smellie, but retaining the Stirling features of dome-less boilers and rounded cabs, and they proved very successful on the Greenock road. In 1895 a new series of 4-4-0s was built by Dubs for this route to the design of James Manson; they were similar to his earlier products but had their driving wheel diameter reduced to 6 ft. 1¼ in. A second batch, bringing the total to 25, appeared four years later. These loco-

motives almost monopolised the Greenock workings for many years. A number of dock shunting tanks were used at Greenock and included six 0-4-0s, the most powerful of their wheel arrangement in the country, turned out by Manson in 1907-9.

The work done by the diminutive, small-wheeled Manson 4-4-0s with the substantial boat trains was little short of remarkable in view of the climb from the pier. With loads of some 160 tons they passed Upper Port Glasgow box in about 12¾ mins. from Princes Pier, completing the run to Paisley in 27 min. In the opposite direction the collar work was encountered between Cart Junction and the summit, and on this stretch times ranged from 13 to 14 min. On the falling gradients to Greenock a maximum speed of about 75 m.p.h. was attained, although through Lynedoch, where at one time tickets were collected, there was a restriction of 30 m.p.h. In 1900 the 4.3 p.m. coast express from St. Enoch (" no heavy luggage allowed "), was due at Princes Pier at 4.34 and its schedule involved an average speed of 45 m.p.h., while the up morning express from Princes Pier, leaving at 9 a.m., called at Lynedoch and Paisley and was allowed 40 min. ; considering the difficult starts from the pier and Lynedoch this was another rigorous test of locomotive capability.

When the Princes Pier line opened a service was provided via Johnstone, but latterly only two trains in each direction worked between Greenock and Kilmarnock, connecting there with London trains, and this useful service ceased as from September 30, 1900. Greenock was also included in the through coach workings between the G. & S.W.R. and N.B.R. via Bellgrove, which began in 1872 ; by the summer of 1883 there were six through coach services each way daily between Edinburgh and Greenock, but these workings finally ceased in 1899. The Greenock line retained three classes until May, 1889, long after other sections had given up second class. At one time it enjoyed what was practically a regular interval service, as most trains left St. Enoch at five minutes past the hour. On the G. & S.W.R. steam heating was introduced very gradually and the Greenock line was one of the last sections to benefit ; hot water warming pans, in first class compartments only, were still in use up to December 31, 1921.

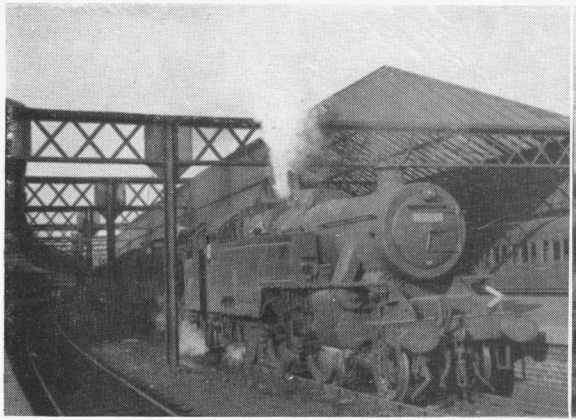
After the outbreak of war in 1914 a skeleton service was maintained from Princes Pier by chartered steamers, but the spacious days when the expenditure of money was nothing compared to prestige then disappeared for ever from the Clyde. With the formation of the L.M.S. in 1923 further economies were made. A number of steamers commenced their sailings at Princes Pier and made a call at Gourock, although train connections were provided at both piers. Liner specials were also run on Saturdays to connect with trans-Atlantic sailings.

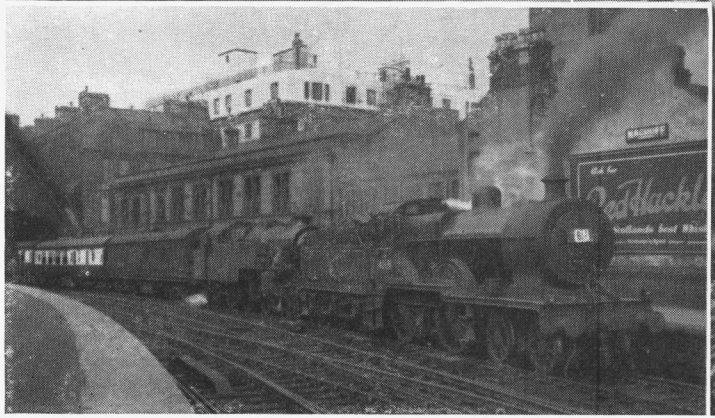
The line continued to be worked for a time by the Manson 4-4-0s, probably because the old, light coaches remained in use, and in 1927 C.R. type semaphore route indicators were introduced. However, with the standardisation following the grouping the old Scottish engines began to disappear from the coast lines. There was a rapid withdrawal of former G. & S.W. motive power ; the Manson 4-4-0s had gone by 1932 and the " Wee Bogies " two years later. To replace them came a batch of Derby-built " 2P " 4-4-0s, accompanied by ex-Caledonian types, and in 1934 new Fowler 2-6-4 tanks Nos. 2419-22 were allocated to Princes Pier shed. In 1937 carriage-warming here was being performed by ex-Highland 4-4-0 No. 14411 *Ben Loyal.*

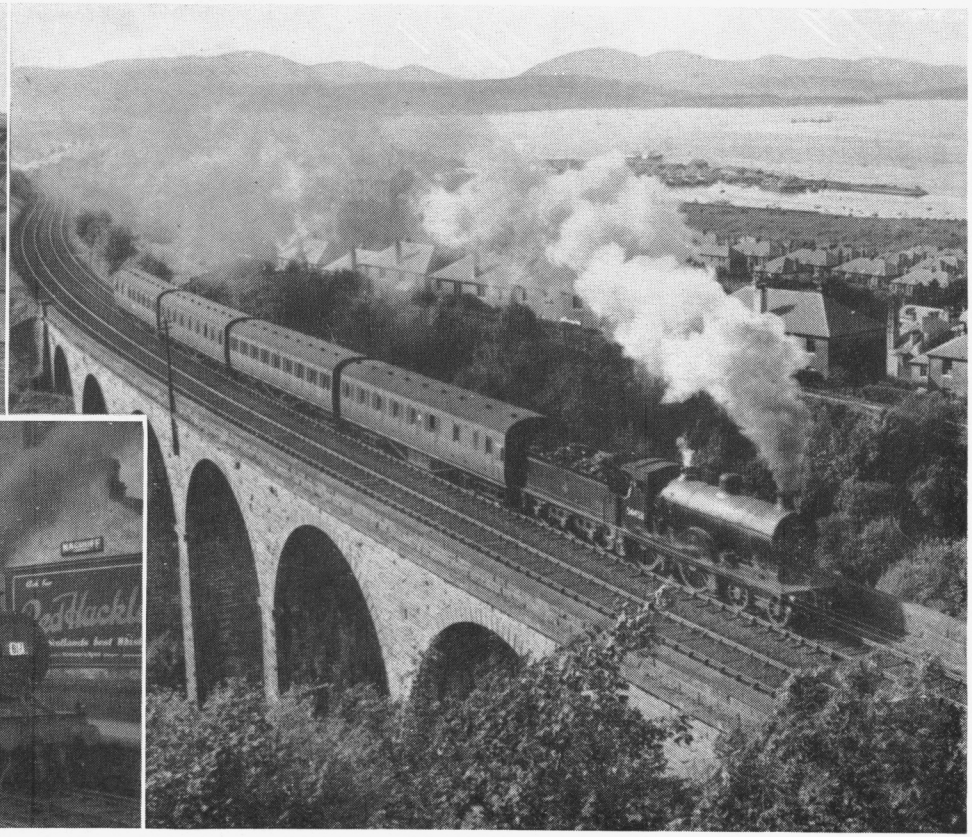
Between the wars good locomotive work was still the rule on the Princes Pier line. Typical of this was the performance of a Manson 4-4-0, which covered the 8½ miles from Houston to the summit in 12 min. 22 sec., at an average speed of 41½ m.p.h., with a load of 140 tons, attaining 74 m.p.h. on the descent to Greenock. In the opposite direction another of these engines climbed the 1 in 70-98 at a steady 28½ m.p.h. and attained 73 m.p.h. on the subsequent descent. Ex-C.R. 4-4-0s were now appearing and with four coaches, one was timed to clear Upper Port Glasgow (5.2 miles) in 10 min. 10 sec. and was through Kilmacolm (8.1 miles) in 13 min. 20 sec. ; a maximum speed of 78½ m.p.h. was attained near Bridge of Weir, and Paisley was reached in 22 min. 40 sec. Perhaps, however, the most notable uphill work was recorded with the Fowler tanks ; one reached 60 m.p.h. on the 1 in 98, passing Upper Port Glasgow in 8 min. 23 sec. At this period speeds of nearly 85 m.p.h. were being touched through Kilmacolm.

After the outbreak of war in 1939 the steamer services from Princes Pier were withdrawn and the rail service reduced to one of stopping trains. However, the pier handled a tremendous amount of military traffic and 4,308 special trains had been run from it by the end of the war. During this period the ordinary service comprised eleven trains in each direction daily with an extra three down on Saturdays.

The best down train to-day is the 51 min. 12.7 p.m. (SO). There are no Sunday services. Lately a number of the trains have been diverted to run via the Canal line to provide a better service from







PRINCES PIER LINE TRAINS

Top left : Class "4MT" 2-6-4T No. 42691 and Class "2P" 4-4-0 No. 40636 prepare to leave Princes Pier with the 5.27 p.m. to Glasgow (St. Enoch). (18/4/54).
Bottom left : A C.P.R. "Empress Voyager" boat train awaits the right-away at St. Enoch ; double-heading are Class "2P" 4-4-0 No. 40651 and Class "4MT" 2-6-4T No. 42191. (19/6/54).
Right : Ex-Caledonian 4-4-0 No. 54453 climbs high above the Clyde with the 4.37 p.m. Princes Pier-St. Enoch and crosses the Devol Viaduct on its way to Upper Port Glasgow. (7/8/54).
[*W. A. C. Smith*

Mosspark (West) and Corkerhill, where large housing estates have been erected. In summer there is a late train (9.45 p.m.) from Princes Pier.

The locomotive workings are shared by Corkerhill and Princes Pier sheds ; the former provides mainly standard 2-6-4 tanks, with an occasional " 2P " or compound, and the latter ex-C.R. 4-4-0s, of which it has nine (Nos. 54440/1/53/68/79/92/8, 54506/8). Also shedded at Princes Pier are Pickersgill 0-6-0s Nos. 57682/90, a " Beetlecrusher " 0-6-0 tank (No. 56165) and Fowler 0-6-0 dock shunter No. 47169. The last two spend their time shunting or working short distance freights to Inchgreen, while the 0-6-0s operate on the longer distance goods trains to Elderslie, frequently assisted up the " hill " by the " Caley " bogies. In the opposite direction the sight of one of these elephantine 0-6-0s rushing through Kilmacolm on a winter's night as it tackles the final climb to the summit, rolling and swaying alarmingly, belching out sparks and almost always with a leaky smokebox door gleaming white-hot, is a sight distinctly impressive from the visual and oral, if not the efficiency, aspect. On the morning pick-up which runs as far as Upper Port Glasgow, Corkerhill uses anything from a " Jumbo " to a " Black Five." In addition to the ordinary freight service from Greenock a number of specials are run to convey cattle from Ireland and on one occasion produced an Austerity 2-10-0. Passenger trains consist of three to five standard L.M.R. non-corridor coaches, but in summer old short G. & S.W. vehicles still appear ; a rare bird last year was a twelve-wheeler.

The ex-Caledonian 4-4-0s make the Princes Pier line an oasis of pre-grouping atmosphere in the standardised Glasgow area, with its hordes of 2-6-4 tanks. It is pleasant to record that No. 54440, old No. 139 and the first of McIntosh's superheater " Dunalastair IV " Class, is still on regular turns and a very lively performer.

Some two years ago, during the wholesale closure of branch lines, there were persistent reports that the passenger service was to be withdrawn beyond Bridge of Weir and certainly at this period the service had reached a deplorably low level. Travelling by the 8.20 a.m. from Princes Pier no punctual arrival at St. Enoch was noted for four months and daily delays were reaching 75 minutes. Apart from the more common causes of snow, fog, freezing of the electric points at St. Enoch, and failures from lack of steam on the climb from Greenock, excuses included signal failures, derailments, theft of telephone wires, broken rails, signalmen going home and lack of water. As a final resort Princes Pier double-headed the morning business trains, the pilots coming off at Bridge of Weir.

Matters have now improved considerably and the offending 8.20 is always worked by 2-6-4 tank No. 42691, which was transferred to Princes Pier in October, 1952. The stud of C.R. 4-4-0s was also strengthened by the transfer of several from Motherwell. Princes Pier is officially a sub-shed to Greenock Ladyburn (66D), but the only outward sign of this is the latter's decrepit compound (No. 41149) which is stored at Princes Pier in winter (and, until their recent transfer south, the very occasional appearance of a Fowler 2-6-4 tank). Quite often Polmadie 2-6-4 tanks are on loan, while Kingmoor " Crabs " have also been noted. On summer Saturday afternoons the 3.4 p.m. from St. Enoch is worked by a Class " 3F " ex-C.R. 0-6-0, which returns on the 5.25 p.m. double-headed by No. 42691. It goes down again (for the 9.45 p.m.) piloting a " Caley " bogie on the 7.55, and last summer, when the Princes Pier turntable was out of action, there were some very odd tender-first combinations. During the holiday season luggage in advance for the Clyde coast is routed via Princes Pier, and on Saturdays the platforms are piled high with great mounds of it from van trains which arrive and depart in the small hours.

The usual sombre silence of the terminus is also broken twice every three weeks from May to November when the C.P.R. liner *Empress of Scotland* puts in to the Clyde on her Liverpool-Canada service. Passengers are transferred by tender as schemes for a deep-water berth at Princes Pier have so far come to nothing, and a special train is run from St. Enoch. The liner also makes an inward call. The up rail special, which uses the Central station at Glasgow, loads to ten corridors and a couple of luggage vans and is worked by a Corkerhill tank and " 2P " 4-4-0. This service dates from 1950 and last September the specials were embellished with nameboards inscribed " Empress Voyager." Cunard liners from America are now making an increasing number of calls in the Clyde to land tourists and the boat trains in this connection are also usually hauled by a 2-6-4 tank with a Princes Pier ex-C.R. 4-4-0 as pilot. 4-6-0s are not used owing to the small diameter of the turntable at Princes Pier, and two years ago, when three Class " 5MTs " arrived at the pier with special parties from Ayr and Stranraer, they had to be turned on the triangle at Cart Junction.

In early summer Bridge of Weir and Kilmacolm are graced on Saturday afternoons by unusual visitors such as " K2 " 2-6-0s, " J37 " 0-6-0s, " V1 " 2-6-2 tanks and Class " 5MT " 4-6-0s, when Sunday

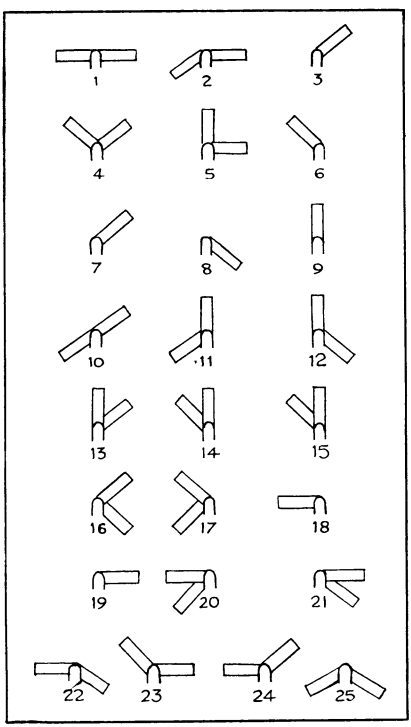
school trips from Glasgow suburban stations arrive. Another special working, this time in July, is an Orange Walk special from Greenock, which last year travelled to Irvine and was worked by Nos. 54508 and 41139. In 1952 a surprising event was the running for several Saturdays of an evening excursion from Kilmacolm to Ayr or Largs.

This train, at first hauled by a "2P" or a 2-6-4 tank, but later by a 4-6-0, traversed the 1 in 60 curve from Cart Junction to Johnstone No. 1, disused by regular passenger services for over fifty years.

In the Inglis Plan for Glasgow Transport published in 1951 the Princes Pier line was included in the third stage of electrification and a halt at Upper Port Glasgow was proposed. But it is obvious that without a steamer service, for which frequent requests during the past eight years have so far been fruitless, Princes Pier cannot support even the present rail service; Kilmacolm and Bridge of Weir must be relied upon, unless expanding Port Glasgow is granted a new station.

GLASGOW AREA SEMAPHORE ROUTE INDICATORS

As a semaphore-type route indicator of the old Caledonian pattern appears on an engine in one of the illustrations accompanying this article, we feel that readers may be glad of a complete key to the codes concerned, for which we are indebted to the Press and Public Relations Officer, Scottish Region, and to Mr. G. H. Robin. These route indicators were introduced by the Caledonian to help signalmen to identify trains in busy areas. With the formation of the L.M.S., trains on joint lines, i.e. Ayrshire trains via Paisley, and Kilmarnock trains on the Barrhead Joint Line, were no longer distinguishable from Glasgow Central trains by their livery, which was further complicated when Caledonian engines infiltrated the G. & S.W. section services. Consequently, St. Enoch trains using these joint lines were also given semaphore indicators; but the practice did not spread to other routes, e.g. Kilmarnock-Ardrossan and Muirkirk-Ayr. To-day there is a certain laxity in carrying the codes as far as St. Enoch is concerned; apart from the Princes Pier trains, the practice has apparently fallen into disuse.



KEY

1. Glasgow Central and Main Line via Motherwell. *St. Enoch and Ayr.*
2. Glasgow Central and Main Line via Holytown.
3. Glasgow Central and Kirkhill and Burnside.
4. Glasgow Central and Hamilton, Strathaven and Lesmahagow. *St. Enoch and Stranraer.*
5. Glasgow Central and Edinburgh direct. *St. Enoch and Girvan.*
6. Glasgow Central and Low Level trains to Newton, also High Level trains to and from Newton. *St. Enoch and Largs.*
7. Glasgow Central to Tollcross.
8. Glasgow Central Empty Carriage trains. *St. Enoch station pilot.*
9. Glasgow Central and Gourock, also to Dumbarton or Balloch.
10. Glasgow Central to and from East Kilbride, and Low Level trains terminating at Rutherglen.
11. Glasgow Central to and from Renfrew. *St. Enoch and Renfrew.*
12. Glasgow Central to and from Paisley, also to Kilbowie or Clydebank. *St. Enoch and Paisley West, including Corkerhill.*
13. Glasgow Central to and from Ardrossan or Kilmarnock, via Cathcart route. *St. Enoch and Ardrossan.*
14. Glasgow Central to and from Kilmarnock, via Barrhead route.
15. Trial running of Carriages. When a train of carriages is run from St. Rollox Workshops for either Denny West Junction or Stirling between 10. a.m., or 12. noon for a trial run to test the axles for running cool, the engine working it carries this Route Indicator.
16. Glasgow Central to Coatbridge.
17. Glasgow Central to Airdrie. *St. Enoch and Greenock (Princes Pier).*
18. Glasgow Central to Maryhill via Kelvin Bridge. *St. Enoch and Kilmarnock via Dalry.*
19. Glasgow Central to Maryhill via Partick, also to and from Wemyss Bay.
20. Glasgow Central Low Level Circle Trains going via Kelvin Bridge and returning via Partick, also Cathcart Inner Circle ordinary trains.
21. Glasgow Central Low Level Circle Trains going via Partick and returning via Kelvin Bridge, also Cathcart Outer Circle ordinary trains.
    (Nos. 20 and 21—The position of the arms indicates the direction that westbound Low Level trains take at Stobcross Junction. For Kelvin Bridge they point to the six-foot side of the engine, and for Partick to the opposite side. The indicator is altered at Partick (Central) to one which will indicate the terminal station of the train.)
22. *St. Enoch and Kilmarnock, Dumfries and Carlisle via Barrhead.*
23. Cathcart Inner Circle relief or special trains.
24. Cathcart Outer Circle relief or special trains.
25. *St. Enoch and Dalry, including Johnstone and Milliken Park.*

NOTE.—On the Low Level line the indicators shown above apply only to trains GOING TO the places mentioned.

LOCOMOTIVE RUNNING PAST AND PRESENT

Tank Engine Express Trains

By
CECIL J. ALLEN
M.Inst.T., A.I.Loco.E.

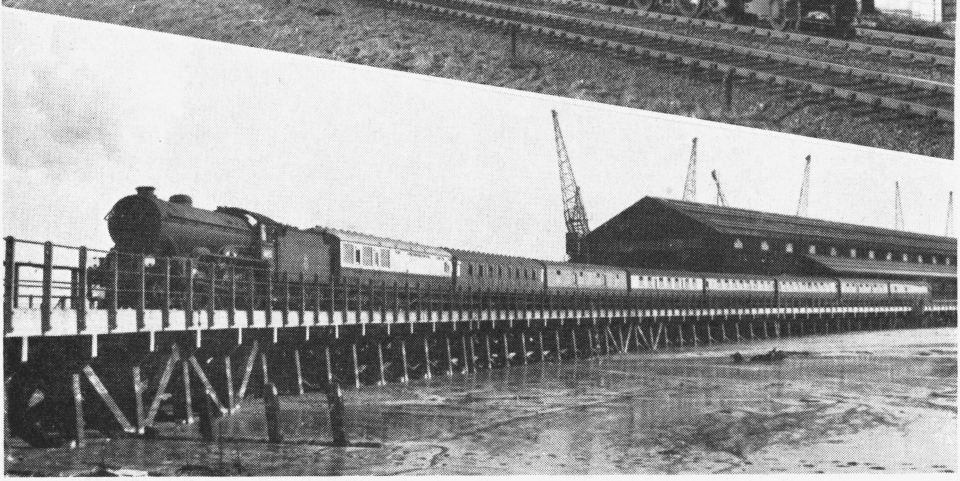
TRADITIONALLY in Great Britain tank engines have been used to work main line trains over longer distances than almost any other country in the world, except, perhaps, New Zealand and Java. Many of the tank locomotive types assigned to such duties, of course, have been the equivalent in power of tender engines in all respects and for this reason the impression of the tank engine performing herculean feats in relation to its size generally has little foundation ; it is merely the fact that it *is* a tank and not a tender engine that invests its performance with an interest out of the ordinary. But this has not always been the case.

In recent years tender engines have taken over many of the duties which formerly were the preserve of tanks, as, for example, on the Central Division of the London Midland Region—once the Lancashire & Yorkshire Railway—where the Aspinall 2-4-2 tanks certainly did perform prodigies of hard work. I am not likely to forget my 1922 footplate ride on No. 1532 from Salford to Colne, when the 66-ton tank proved that her boiler, with no more than 18.8 sq. ft. of firegrate and 1,090 sq. ft. of combined heating surface, could find steam for 50 to 55 per cent. cut-off with full regulator for mile after mile of the tremendous climb from Clifton Junction to Baxenden Summit, nearly 16 miles long ; but as I described this run in detail as recently as the April, 1951, issue, there is no need to repeat the details. To-day, with eight-coach trains and " Crab " 2-6-0s or Class " 5 " 4-6-0s, the competence of the locomotive work needed by the two evening non-stops to reach Accrington in 40 min. from Salford is but a pale shadow of what was turned out regularly in those earlier days by the Aspinall 2-4-2 superheater tanks.

Another competent tank class of the same period was the Bowen Cooke 4-6-2 type tank of London & North Western origin. I remember once coming behind one of these engines from Shrewsbury to Crewe, when we had an eleven-coach corridor train weighing 288 tons empty (it included a lot of the light Great Western stock of the period) and 305 tons gross. The start from Shrewsbury is difficult, up a 3-mile bank at 1 in 117-124 broken in the middle by ½-mile level ; climbing this the tank accelerated gamely to 37½ m.p.h., so passing Hadnall, 4.6 miles, in 8 min. 25 sec. By Wem, 10.7 miles in 15 min., we were doing 64 m.p.h., and the 6¾-mile ascent from there to Whitchurch, at 1 in 136-161, then 1 in 216-300, and then easier, was surmounted at 53 m.p.h. The 18.9 miles to Whitchurch took 23 min. 20 sec. Down to Nantwich we reached 69 m.p.h., passing that station, 28.2 miles, in 32 min. 55 sec., and after a slow and careful approach, we stopped at Crewe in 39 min. 35 sec. for the 32.7-mile run—a commendable effort. To-day the trains over this section, though certainly often heavier, are allowed from 40 (one only) to 50 min. (several with recovery margins), and not infrequently enjoy the distinguished services of tender 4-6-2s on their running-in turns.

A shorter main line over which tank engines still hold sway is that between Fenchurch Street and Shoeburyness. Here again, as on the Salford-Colne line, it is only those who are older who can recall the brilliant performances of the one-time London, Tilbury & Southend 4-4-2 tanks, innocent of any modern refinements such as superheating, and with trains which on the most popular morning and evening services loaded to no fewer than 13 bogie vehicles, with all seats occupied. As these were non-corridor coaches, the weight of such a train, just over 300 tons empty, was very little short of 350 tons with a full passenger complement. As far back as fifty years ago the 5.15 p.m. from Fenchurch Street was booked over the 34.8 miles to Westcliff in 47 min., and to Southend in 50 min., and as the weight of this train grew, its working became a progressively more exacting task for the engines of the period. I have one record of a run behind No. 48, the last of the 1897 batch of 4-4-2 tanks, which by the time I made the run had been rebuilt with the larger boiler, and 19 in. in place of 18 in. by 26 in. cylinders. With their 6 ft. 6 in. driving wheels, these engines were, in effect, express engines in all respects but the possession of a separate tender.

After the usual severe slack through Stepney, it took 13 min. 42 sec. to get through Barking, 7.6 miles, where also we slowed to 40 m.p.h. for the curve. Attaining 50 m.p.h. on the level at Dagenham, and 60 on the descent from Upminster to East Horndon, No. 48 fell to 36½ m.p.h. on the ½-mile at 1 in 132 and 1½ miles at 1 in 100



Top : IN METRO-LAND—Class " L1 " 2-6-4T No. 67753 sets off from Aylesbury with the 1.9 p.m. to Baker Street, London. (2/11/53). [*N. W. Sprinks*

Centre : TOILING UP TO DUTCHLANDS SUMMIT, in the Chilterns, Class " L3 " 2-6-4 tank No. 69064 makes heavy weather of an up local freight on the former Met.-G.C. line south of Aylesbury. (28/2/53). [*N. W. Sprinks*

Bottom : " . . . . BLESS 'EM ALL ! "—A B.A.O.R. leave train leaves Parkeston Quay for Liverpool Street behind Class " B17 " 4-6-0 No. 61651 *Derby County*. (4/54). [*P. J. Lynch*

up to Laindon ; then came another 60 down the hill towards Pitsea. So Upminster, 15.3 miles, was passed in 23 min. 30 sec., Laindon, 22.8 miles, in 33 min., Pitsea, 26.5 miles, in 37 min. 18 sec., and Leigh (the old station), 33.1 miles, in 44 min. 20 sec., the stop at Westcliff, 34.8 miles, being effected in 46 min. 47 sec. It was good going for an engine of these limited dimensions to run the 21.8 miles from Dagenham to Leigh, pass to pass, in 26 min., with a 350-ton load. By the onset of the First World War the 5.15 p.m. had been provided with a relief train at 5.5 p.m., and the latter had taken over the non-stop working to Westcliff, on an accelerated timing of 45 min.

This was the heyday of London, Tilbury & Southend locomotive running. When the Midland Railway absorbed the Tilbury line in 1912, the Midland locomotive authorities thought that they knew better how to maintain the Tilbury stud than the staff which had kept the engines in such perfect running order at Plaistow and Shoeburyness, and declension in performance began to set in at once. The standard Midland chimney interfered with the steaming ; the Midland method of valve-timing resulted in a reduction of power output (felt seriously by engines which for most of their time had to be worked very hard) ; and the Midland method of fixing the tubes at the firebox end impeded the gas flow ; also the change from a soft Scotch coal to hard Yorkshire was a change for the worse. After these " improvements " the Tilbury tanks never recovered the former high quality of their work.

Now, of course, all is completely changed. the 92-ton three-cylinder L.M.S. 2-6-4 tanks, with all the advantages of ample boiler power, three 16 in. by 26 in. cylinders, 200 lb. pressure, and 24,600 lb. tractive effort, are more than masters of their work, especially as loads also are lighter. No thirteen-coach trains are seen to-day, and the counterpart of the old 5.5 p.m., the present 4 p.m. from Fenchurch Street, though allowed 1 min. less to Westcliff—44 as compared with 45 min.—has a load of eight bogies only. But some of the trains with intermediate stops have sharper timings than in Tilbury days.

On a run with the 4 p.m. down since its acceleration, Mr. J. Colyer-Fergusson timed 2-6-4 No. 42531, with a load of 232 tons tare and 250 tons gross, to cover the 21.2 miles from Dagenham to Leigh (the present station), pass to pass, in 20 min. 43 sec., and to complete the run of 34.8 miles from Fenchurch Street to Westcliff in 42 min. 30 sec. After the usual slow passage of Stepney, No. 42531 attained 57 m.p.h. beyond Plaistow, and then slowed to 51 through Barking (7.6 miles in 12 min. 40 sec.). Speed then rose to 64 m.p.h. after Dagenham and to 67 at East Horndon ; a high minimum of 50½ m.p.h. at Laindon summit was followed by 71 maximum down to Pitsea, where speed was moderated to 55 round the curve. So Upminster, 15.3 miles, was passed in 20 min. 30 sec., Laindon, 22.8 miles, in 27 min. 54 sec., Pitsea, 26.5 miles, in 31 min. 25 sec., and Leigh, 32.5 miles, in 37 min. 23 sec. ; this should have made an arrival at Westcliff in 40 min. or slightly less an easy matter, but 2½ min. was lost by a permanent way slowing after Leigh.

On another run, timed by Mr. M. T. McHatton, No. 42525 had a nine-coach load of 252 tons empty and 275 tons full, on a train which stopped at Barking. From here a leisurely start was made, speed not exceeding 50 m.p.h. through Dagenham ; but then the engine was opened out, and touching 68 m.p.h. at East Horndon, went up to Laindon at no lower speed than 56 m.p.h., even on the 1 in 110, a most vigorous climb. Down to Pitsea the driver was content with a maximum of 68 m.p.h., and slowed to 44 through that station ; but on the level beyond 65 m.p.h. was reached before steam was shut off for Leigh. Dagenham, 3.7 miles, was passed in 6 min. 35 sec. ; Upminster, 7.7 miles, in 11 min. 6 sec. ; Laindon, 15.2 miles, in 18 min. 14 sec. ; and Pitsea, 18.9 miles, in 21 min. 46 sec. ; the stop at Leigh, 24.9 miles, was made in 27 min. 53 sec., instead of the 29 min. booked.

But it is probably on the main line between Euston and Tring that the work of the L.M.R. 2-6-4 tanks has been seen to the best advantage. Even though the trains for the most part are made up to seven non-corridor bogies only—about 200 tons tare and 230 tons or so when fully loaded—the point-to-point timings are extremely tight. Down, for example, the 23 min. over the 17.5 miles from Euston to Watford of the 4.56 and 6.37 p.m. trains is 1 min. less than the " Special Limit " timing of an express such as the 4.35 p.m. to Birmingham. In the up direction several of the " locals " are booked over the 12.1 miles from Watford to Willesden in 14 min. start to stop, and the 8.20 a.m. from Bletchley to Euston beats this with a timing of 17 min. for the 15.6 miles from King's Langley to Willesden (55.1 m.p.h.), and under " B " headlights, too ! I am aware that to-day 2-6-4 tanks have been displaced from many of these trains by Class " 5 " and Class " 4 " 4-6-0s, but in previous years the tanks proved themselves well capable of observing these schedules, and the Jehus among their drivers used to the full the invitation to speeding extended by such bookings.

The most exciting run that I have ever

known with an engine of this type over this course was one timed by Mr. A. P. le M. Sinkinson, a careful recorder, in the summer of 1938. In those days the authorities used to put the 5.31 p.m. from Bletchley, all stations to Bushey and from there Willesden and Euston only, on to the fast line from Watford, between the 4.50 p.m. from Birmingham, which passed Watford at 6.27 p.m. and stopped at Willesden before reaching Euston at 6.50 p.m., and the Perth express due past Watford at 6.46 and into Euston at 7.5 p.m. On this particular occasion the driver of Stanier 2-6-4 tank No. 2446 had evidently decided that no one should accuse him of having delayed "The Perth," and as he had behind him no more than a four-coach train of 108 tons tare and 120 tons gross, he had everything in his favour.

Starting away from Bushey like a rocket, he did the first mile in 2 min. 5 sec., averaged 60 m.p.h. over the next two miles, and covered the next ten miles in 7 min. 20 sec., at an average of 81.8 m.p.h., reaching a maximum of 84. There was no slowing whatever for Willesden Junction, and the high speed continued unchecked until about Kilburn. Harrow, 4.6 miles, was passed in 5 min. 20 sec., Willesden, 10.6 miles, in 9 min. 35 sec., and milepost 3, 13.0 miles, in 11 min. 25 sec. ; to milepost 1, 15.0 miles, the time was 13 min. 45 sec., and then, not surprisingly, there came a stop on Camden bank, 15.5 miles having been covered from start to stop in 14 min. 45 sec. The stop lasted 25 sec., and eventually Euston, 16.0 miles, was reached in 17 min. 30 sec., or slightly under 16 16 min. net, as compared with the schedule allowance of 22 min.

In the middle 1930s it was the regular practice to dispatch the "Mancunian" from Manchester to Wilmslow with a Fowler 2-6-4 tank, the express engine being sent to Stockport to fetch the Colne coaches, with which it would be waiting at Wilmslow to back the latter on to the main train as soon as the tank engine had uncoupled and drawn ahead. On one occasion No. 2357, with a nine-coach load of 257 tons tare and 270 tons gross, slowed cautiously over Slade Lane Junction to 20 m.p.h., and passed Mauldeth Road, 3.5 miles in 7 min. 19 sec. ; then the tank attained 67 m.p.h. on the gentle descent to East Didsbury and went up the 2½ miles at 1 in 135 to Styal in great style at a minimum of 50½ m.p.h., so passing Styal, 9.9 miles, in 13 min. 44 sec. ; the stop was made at Wilmslow, 11.6 miles, in 16 min. 35 sec. On another occasion No. 2363, with 7 coaches of 215 gross tons, notwithstanding a slow to walking pace for signals at Slade Lane, made the run in 15 min. 50 sec., or 15 min. net, touching 71½ m.p.h. at East Didsbury. It is a striking commentary on the growth of passenger traffic that to-day the up "Mancunian" needs a 12-coach train of some 400 tons weight to carry it, while the one-time East Lancashire portion has blossomed out into a complete independent train from Manchester and East Lancashire to Euston *via* Stoke.

On a run over the Central Wales line, No. 2352, on the falling grades northwards out of Knighton, passed Bucknall, 4.3 miles, in 5 min. 40 sec., reached 75 m.p.h. before Broome and so cleared milepost 1, 11.3 miles, in 11 min. 55 sec. ; notwithstanding a signal check, the stop at Craven Arms, 12.3 miles, was effected in 15 min. 10 sec. After leaving Craven Arms, a very fast climb was made to Church Stretton ; up gradients of 1 in 113-103 the engine attained 47 m.p.h., and with 56 at Marsh Brook breasted the summit of 2 miles at 1 in 112 at 50 m.p.h., which took the train through Church Stretton, 7.1 miles, in 10 min. 10 sec. Without exceeding 67 m.p.h. on the long descent, No. 2352 passed Condover, 15.6 miles, in 18 min. 25 sec., and with the usual very slow finish stopped at Shrewsbury, 19.9 miles, in 25 min. 20 sec. As the Knighton-Craven Arms and Craven Arms-Shrewsbury runs were then allowed 21 and 29 min. respectively, the engine had gained 9½ min., or 11 min. net, by these sprightly proceedings ; but the train weight was only 120 tons. To-day, under Western Region auspices, the fastest Knighton-Craven Arms booking is 18 min., and from Craven Arms to Shrewsbury, 32 min. with a stop at Church Stretton or 34 min. [*sic*] non-stop !

The much smaller Fowler 2-6-2 tanks also could turn out some remarkable performances for their size when occasion required. One of the most outstanding of which I have any note, timed by a correspondent, was when the then No. 15514 was substituted, at a moment's notice, for a "Prince" 4-6-0 which had run hot, on a Leeds-Liverpool express at Manchester Victoria. Indeed, it reflected credit on the Victoria staff that the change-over was made and the train was away no more than 6 min. late. Four bogies only were running through, so the gross load was a modest 120 tons. Passing Pendleton, 2.3 miles, in 4¼ min., the tank climbed the 2.1 miles to Pendlebury (mainly 1 in 99-72) in 2¾ min., and ran the next 10.4 miles of sharp undulations to Crow Nest Junction in 11¾ min. Between there and Hindley came some permanent way slowings over pitfalls, after which the 2 miles at 1 in 92 to Orrell tunnel were surmounted at a minimum of 42 m.p.h., Upholland, 22.2 miles, being passed in 29 min. Then the little engine got away to some purpose, working up to all but

75 m.p.h. at Kirkby, where there was a pronounced easing due to a suspicion that this gay progress was causing a hot box to develop. However, Kirkby, 29.4 miles, was passed in 31 min., and the 2-6-2 tank brought her train triumphantly into Liverpool Exchange in 44¾ min., so almost exactly keeping the 45-min. timing then in force over this 36.4 miles.

Finally, a word about another route out of Manchester over which an important express at one time was worked regularly by tank engines. This is the line from London Road to Stoke-on-Trent, where tank engines of the North Staffordshire Railway, first 4-4-2 and later 0-6-4 tanks, used regularly to work the 12.10 p.m. train, which later became the up "Lancastrian." In those days the 12.10 p.m. carried a Birmingham portion in addition to the main train for Euston, and might load up to 50 or 52 axles, to be hauled over some quite severe grades. On one run in 1914, one of the Adams superheater 4-4-2 tanks, No. 55, had to tackle a 12-coach train of 359 tons and 380 tons gross from Stockport. Cheadle Hulme, 2.3 miles, was passed in 4 min. 55 sec., and the long grind up to Macclesfield was begun at the usual reduced speed after the junction slack. Yet on the ¼-mile level at Adlington, after climbing steadily at 1 in 192-240, and on the steeper rise beyond, partly at 1 in 166 and 154, the lowest speed was 47¼ m.p.h. So the 11.5 miles from Stockport to Macclesfield were run in 18 min. 15 sec. Banked in rear from Hibel Road by a 0-6-0 tank, the train mounted the 1¼ miles at 1 in 102 to Macclesfield Moss in 5 min. 40 sec. for the 2.5 miles; then, reaching 62½ m.p.h., No. 55 passed Congleton, 8.2 miles, in 11 min. 50 sec. Unfortunately adverse signals were encountered at Mow Cop and Etruria, but even so the 20.0 miles from Macclesfield to Stoke were run in 27 min. 50 sec., and not more than 25½ min. net, an excellent piece of work, which I never saw bettered later on by any of the larger 0-6-4 tanks. This run was in 1914.

But perhaps the most memorable occasion, eight years later, was one on which a small North Staffordshire 0-6-2 tank, No. 158, had to deputise at short notice for one of the 0-6-4 tanks. By now the Birmingham portion was running separately, but the 12.10 p.m. was still a quite substantial train, on this occasion of 298 tons empty and 315 tons gross. From Stockport No. 158 passed Cheadle Hulme in 5 min. 25 sec., there reducing to 28 m.p.h.; and reaching 40 m.p.h. by Adlington stopped at Macclesfield in 21 min. From Hibel Road, Macclesfield Moss was cleared in 6 min. 30 sec., and Congleton in 14 min. 10 sec.; and with a top speed of 54 m.p.h. at Harecastle, the 0-6-2 tank reached Stoke in 28 min. 35 sec. On the two stages of the run there were losses of 3 and 1½ min. respectively, but the performance was by no means discreditable.

SUMMER SATURDAY (*concluded from page 519*)

a turnround margin of 30 min. or less leaves little time for cleaning or servicing it, so that every Saturday trainloads of holiday-makers are encouraged to spread British Railways' reputation for dirty trains. Restaurant cars seem to have been provided on almost all of 1939's long-distance trains, though sometimes they were detached at such unusual points as Salisbury or Wareham, in order to get the maximum service from the available cars.

Many of the Southern's post-war Saturday schedules are much easier than those applicable on other days of the week. There was not the same disparity before the war, and some of the relief trains on the Bournemouth line had some very sharp timings, such as 2 hr. 4 min. non-stop for the 2.24 p.m. down, and two other trains booked in 2 hr. 6 min. But timekeeping on a summer Saturday was not, and probably never will be perfect; there are too many passengers and too many trains about at the same time.

● For 36 years a feature of the Kent Coast has been the 0-6-0 tank *St. Anselm*, which since World War I has rusted away in disuse on the abandoned tracks of Richborough port. This autumn it was at length removed to Cardiff for repairs prior to use in a Welsh colliery, writes Mr. I. Gotheridge.

EAST COAST FITTED FREIGHTS

IN addition to the new express goods lodging-turns referred to in his article in the October issue, Mr. B. Perren writes that the following additional turns were worked by Doncaster men, also on a lodging basis, during the summer:

1. 1.45 p.m. (SX) Class E Doncaster to East Goods (Holloway.)
2. 7.35 a.m. (SX) Class D Clarence Yard to Hull.
   5.3 a.m. (MX) Parcels Doncaster to King's Cross.
   12.5 a.m. (MX) Class D King's Cross to Doncaster.
3. 9.30 p.m. (MX) Class D Doncaster to East Goods.
   7.30 p.m. (SX) Parcels Clarence Yard to Doncaster.
   8.40 p.m. (SO) Parcels King's Cross to York.

The unbalanced set of men on Saturdays returned with the 7.30 a.m. Sunday Class "D" ex-Clarence Yard to Doncaster. Mr. Perren adds that on Saturdays the King's Cross engine and men off Friday's 4.5 p.m. ex-King's Cross Goods returned with the up "Scarborough Flyer" from York at 11.9 a.m. due into King's Cross at 2.58 p.m., not on the 10.50 a.m. goods from York. In answer to the doubts of another correspondent that the 2.55 p.m. from Hull still runs, Mr. Perren states that Hull fish trains are often combined. As the train is worked by the same engine and crew throughout and no stops are made to change crews at fixed booked time, it often runs very much ahead of time, making it difficult to tell what path it is using.

● The B.T.C. has placed a contract with British United Traction Ltd. of London for 43 sets of power equipment and 21 sets of trailer-car equipment to be embodied in a further batch of multiple-unit light-weight diesel trains. Each power car will be equipped with two 150 h.p. diesel engines. The cars for which these power equipments are intended will be designed and built at Swindon.

Swindon tests a "V2"

NEW READING FOR RAILFANS

THE latest of the performance bulletins prepared by the Locomotive Testing Committee of the British Transport Commission* is of particular interest in that it is the first to bring under review the conjugated valve-gear for three-cylinder engines standardised by the late Sir Nigel Gresley on the L.N.E.R. The locomotive class here concerned is the "V2" 2-6-2, of which 184 have been built, and the particular example under test was No. 60845, which had run 4,252 miles in traffic since its last previous "shopping," and ran just over 4,000 miles in test conditions. It is somewhat surprising that during the tests the engine was handled by a Western Region crew which had never worked an engine of this type before; one would have thought it almost axiomatic that an Eastern Region crew accustomed to a "V2" should be employed if the best were to be got out of the engine in the road tests. The latter were hampered by foggy weather, and the consequent operating difficulties vitiated two of the tests altogether; in the plant tests, on the other hand, the weather was very hot, and two firemen had to be engaged to avoid undue fatigue.

During the early stages of the tests on the Swindon plant, there was a good deal of trouble from hot boxes, but this was found to be due to slight misalignment of the engine wheels with the plant rollers. The regulator also gave trouble, and eventually was replaced by one of more modern design; after both these matters had been attended to, the tests proceeded normally. Difficulty was experienced on the Swindon plant because, although the "pop" safety-valves of the engine did not lift until a pressure of 225 lb. had been attained, once having lifted they did not close again until the pressure had dropped to 205 lb.; the discharge of steam, meantime, made work on the testing-plant so uncomfortable and, indeed, hazardous, that during the tests the pressure had to be kept at a figure below that normally maintained with an engine carrying 220 lb. pressure.

As originally built, the "V2" 2-6-2s steamed and worked well, until a beginning was made in 1946 in fitting self-cleaning plates in the smokeboxes, to reduce ash trouble and so increase engine availability. Unfortunately, the self-cleaning plates reduced the steaming capacity of the "V2" boilers far below the previous standard. The Swindon design staff, however, adding further to their already high reputation in the efficient draughting of locomotives, after a series of experiments redesigned the chimney petticoat.

The changes consisted in increasing the depth of the petticoat from 2 ft. 8½ in. to 2 ft. 11½ in., and the depth of the evenly-tapered portion from 1 ft. 2 in. to 2 ft. 4 in.; at the bottom of the taper the previous 1 ft. 3 in. diameter was maintained, but the chimney top diameter was increased from 1 ft. 3½ in. to 1 ft. 4⅞ in. The blastpipe itself was shortened, so that the depth between the bottom of the petticoat taper and the top of the blastpipe was not much altered; actually it was reduced from 2 ft. 9½ in. to 2 ft. 6¼ in. The blastpipe orifice, which had been reduced from 5¼ in. to 5 in. diameter in an attempt to cure the self-cleaning smokebox-plate trouble, was increased again to 5⅜ in.

The results have been astonishing. With the self-cleaning plates in position, and the original chimney and blastpipe arrangement, the maximum evaporation that could be got out of the boiler was 14,000 lb. of feed water per hour. When the self-cleaning plates were removed, the rate rose to 24,000 lb. per hour, but the emission of quantities of black smoke from the chimney showed that combustion was incomplete. Finally, with the modified chimney and blastpipe and the self-cleaning plates once again in position, a continuous rate of evaporation of 30,000 lb. of feed water per hour was obtained, without black smoke. The coal being fired, by two firemen, was Blidworth Grade 2B, and the exhaust steam injectors were in use.

The limit for continuous firing by a single fireman was set at 3,000 lb. of coal an hour, and at this rate the boiler was able to evaporate 20,900 lb. an hour of cold feed, with a steam temperature of 680 deg. F. and a boiler efficiency of 73 per cent (at the higher evaporation rate previously mentioned the boiler efficiency was 58 per cent only). At the 3,000 lb. of coal firing rate, the exhaust steam injector saved no more than 3 per cent in feed and 4½ per cent in coal consumption as compared with a live steam injector, but the condition of the exhaust steam injector may have been responsible for this almost negligible economy.

The indicator diagrams show a remarkable difference between the performance of the outside and inside cylinders respectively, due to the effect of the conjugated valve-motion on the inside cylinder piston-

*BRITISH RAILWAYS (M. & E.E. DEPT.) LOCOMOTIVE TESTING BULLETIN No. 8. *The British Transport Commission, Room* 263, 222 *Marylebone Road, London, N.W.*1. 10s.

valve. The valve-setting was such that the inside piston-valve had $\frac{1}{16}$ in. more steam lap than the outside ($1\frac{11}{16}$ as against $1\frac{5}{8}$ in.), but only one-quarter of the lead ($\frac{1}{16}$ against $\frac{1}{8}$ in.). The maximum cut-off of the outside cylinders in forward gear was 66.8 per cent, but of the inside cylinder 63.6 per cent. Whereas the indicator diagrams for the outside cylinders closely correspond in form for both forward and backward strokes at all steam rates, those for the inside cylinder show totally different curves, a much "fatter" diagram than that of an outside cylinder on the forward stroke, and a disproportionately "thinner" one on the return. At maximum cut-off, the difference between the port openings of the middle cylinder on the forward and backward strokes was as much as $\frac{1}{4}$-inch.

This unevenness of steam distribution resulted in a marked longitudinal oscillation of the tender drawbar, corresponding to a periodic variation in pull—the familiar "fore-and-aft" motion—up to $\frac{1}{2}$-ton plus or minus, but this disappeared at speeds over 40 m.p.h. Also, when the 2-6-2 stopped with the cranks in certain positions, considerable difficulty was experienced in getting the 762-ton train away from stops. On one occasion, 13 min. were spent in alternately bunching the train and straining on the drawbar before a start could be made. This, however, was one of the troubles that might well have proved less troublesome had the engine been handled by a crew accustomed to working a Gresley three-cylinder locomotive. **C.J.A.**

TRAINS ANNUAL, 1955. Edited by Cecil J. Allen. *Ian Allan.* **9s. 6d.**

With more pages than ever before, the ninth edition of *Trains Annual* will undoubtedly repeat the success of its predecessors. This year the Editor usefully collects in one article details and diagrams of the most outstanding designs of this century which never got farther than the drawing board. Once again, studying his proposed 4-8-2 and reading of his super-"A4," one regrets the untimely death of Gresley ; and, reflecting on to-day's hordes of ugly air-smoothed Pacifics, laments that the more shapely outline of Maunsell's 4-6-2 failed to survive the Civil Engineer's scrutiny. A gem of the book is Mr. Norman McKillop's racy reminiscence of his North British driving days, and Mr. D. S. M. Barrie evokes pleasant memories of the North Wales Coast line. The accent is perhaps a little heavily on history this year, so far as British railways are concerned, and one misses an article on a contemporary operating subject, but the *Annual* is none the less readable for that. The illustrations are as rich and numerous as ever, but the printers have not done them quite the usual justice in reproduction, except for Ward's superb colour plates.

BRITISH RAILWAY HISTORY, 1830-1876. By Hamilton Ellis. *Allen & Unwin.* **30s.**

When one recollects that MacDermot required three weighty volumes to deal with history of only one of the 1923 Groups, one doesn't envy Hamilton Ellis the formidable task of compressing the history of all four into the same number. But what a worthy task it is ; no longer will the enthusiast with a leaning to history require to overburden his shelves if he wants to be able to turn up the basic facts of any British railway's past at short notice. This new work is, of course, no mere reference history—one would not expect that from Hamilton Ellis—but an immensely readable book to boot, as racy as any novel. True, there are occasional rather breathless flurries of dates when the author, having spread himself over the picaresque antics of such men as the North Western's Huish, seems to find space ebbing from him too fast and hurries to catch up on those duller railways which contrived to open their tracks peaceably, without double-dealing their neighbours or worse. It is at these infrequent intervals one regrets that the publisher has not supported the author with maps ; their periodical appearance throughout the book would have been invaluable to help the reader unversed in railway history to keep a picture in his mind of the stages to which lines in different parts of the country had developed in each decade. However, these and a canard concerning the fixing of "Rebuilt 1951" plates on No. 70000 at Swindon, where it has never been (this tale originated, I believe, when No. 70014 went to Swindon after buckling its side rods on the "Golden Arrow" in December, 1951, and was allegedly exhibited on an open day with a placard reading "Built Crewe 1951, Rebuilt Swindon 1951"), are small blemishes on a most notable book.

THOSE WERE THE TRAINS. By H. Gordon Tidey. *Ian Allan.* **7s. 6d.**

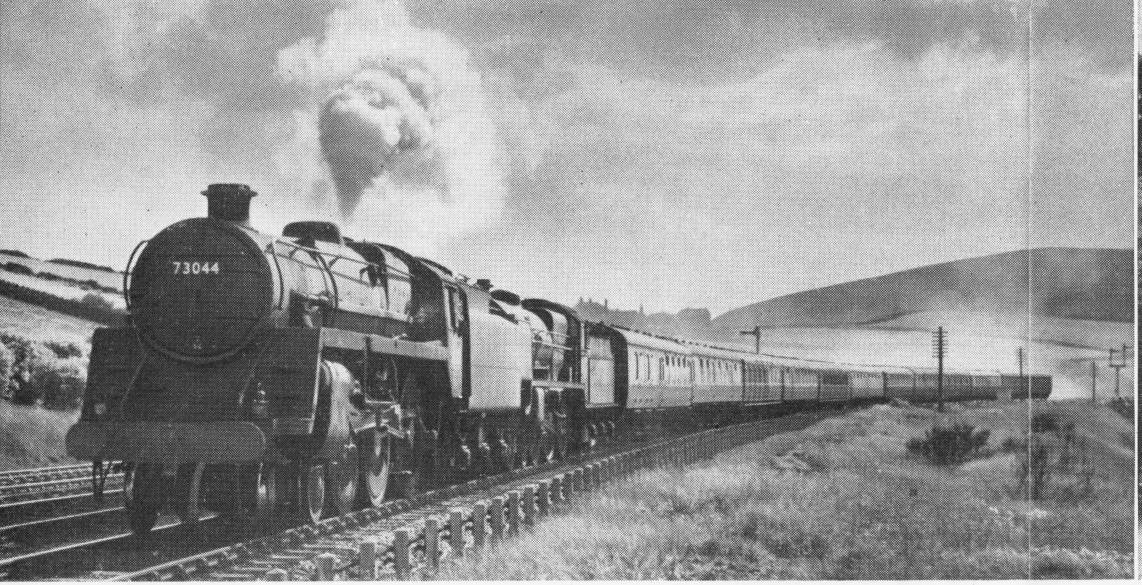
Older readers who in recent years have found Mr. Gordon Tidey's pre-grouping photographs a delectable oasis in the desert of modern standardisation will revel in this book. The 115 excellently reproduced pictures, the perfect clarity of which should be a model to modern photographers, range from the Highland to the Brighton, from a "Cardean" to an Isle of Wight 2-4-0 tank, and include such gems as a "Precursor" and a Hughes 4-6-0 in double harness on a freight. The author's memory seems to be at fault in one or two of his captions, however ; for example, I do not recollect a M. & G.N. service from Cromer which included through coaches for Manchester and King's Cross in one train, and the picture of two Adams 4-4-0s allegedly taken in 1915 shows one of them in Southern livery.

MEN OF THE FOOTPLATE. By P. Ransome-Wallis. *Ian Allan.* **10s. 6d.**

It is refreshing to turn from some of the romantic idylls of footplate life and work to such a realist approach as this. The author does not gloss over the fact that the undeniable statistical benefits of nationalisation have not yet been enough to fashion a happily efficient railway. Chiefly, nationalisation has destroyed and so far failed adequately to replace the old loyalties, in a grossly materialistic post-war age when figureheads are more needed than ever—an age when, to quote Driver Harris, a railwayman of the old school who loves engines and engine driving, "some of the staff are prepared to twist every authentic agreement . . . to reap some petty personal advantage." What a contrast to Harris' own philosophy, discussing the dignity of his job as a top-link driver, that "money is not the only consideration when you are older and get up into the senior grades." It must not be assumed, however, that this book is all analysis of present-day evils. For the most part it is the fascinating story of the careers of four top-link drivers, their views on the engines they have driven and the men they have worked with and under. There are interesting discussions of differences in rostering practices between the Regions, and all the men have some amusing asides on their job to recall.

THE EMPIRE'S FASTEST TRAIN

On paper, at any rate, the "Bristolian" has surrendered its title of the British Empire's fastest train, writes a friend from across the Atlantic. This winter the Canadian Pacific has introduced a working by two Budd R.D.C. railcars coupled together, between Calgary and Edmonton, which covers 194 miles in 215 min. northbound and 210 min. southbound, inclusive of nine stops and over single track which is often severely graded ; between two of these stops, Ponoka and Wetaskiwin, 22.2 miles are scheduled in 19 min. start to stop, for an average of 70.1 m.p.h., which eclipses that of the "Bristolian."



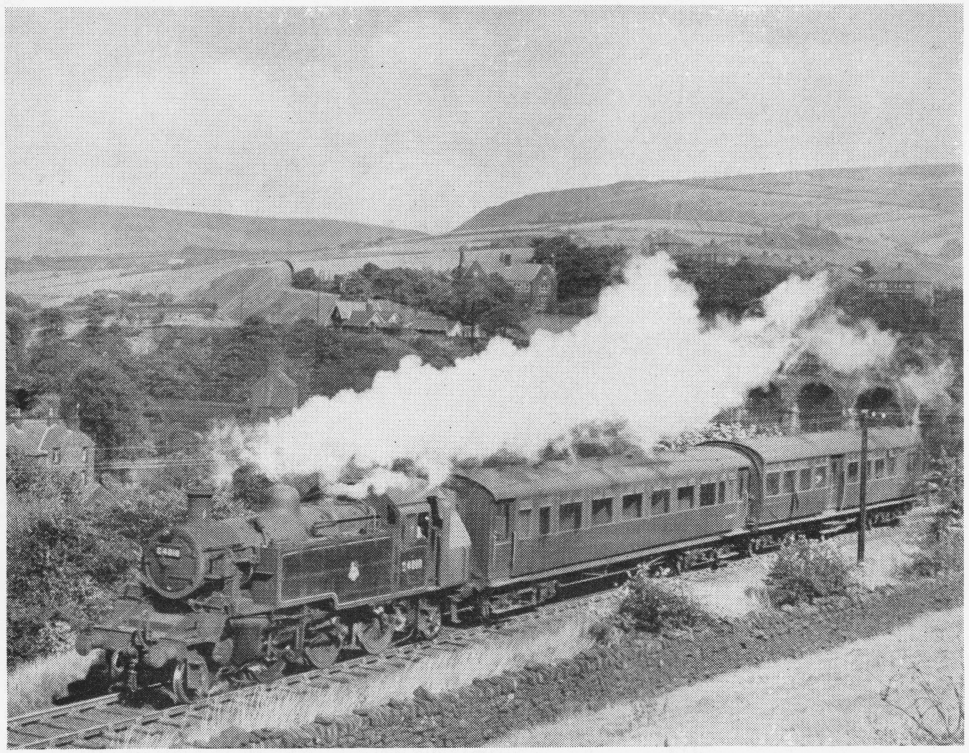
MUSIC ON THE MOORS

Top left : Despite its gruelling climb out of Manchester, Class "5MT" 4-6-0 No. 73044 has steam to spare as it nears Saddleworth with a Newcastle express ; the train engine is "Patriot" 4-6-0 No. 45533 *Lord Rathmore*. (28/8/54). [*K. Field*

Below : Class "2MT" 2-6-2T No. 84010 ambles away from the main line near Saddleworth (in the background) and makes for Delph with an auto-train from Oldham. (11/10/54). [*J. Davenport*

Upper right : Class "A8" 4-6-2T No. 69882 eases up after climbing the 1 in 49 into Goathland with a Whitby-Malton train. (8/5). [*K. Field*

Right lower : An empty pigeon special returning from Ripon to the W.R. crosses Saddleworth viaduct en route from Leeds to Stalybridge double-headed by "Crab" 2-6-0 No. 42859 and "5MT" 4-6-0 No. 73014. (28/8/54). (*K. Field*



Summer Saturday on the Southern

by J. N. FAULKNER

A MEMORY OF 1939

MUCH of the Southern's attraction for the enthusiast is concentrated in the dozen or so Saturdays during the summer season, when the full resources of motive power, rolling stock and track facilities are mobilised to cope with thousands of holidaymakers. This was so before the last war, and it is interesting to compare operations then, before the S.R. became the proud possessors of 140 air-smoothed Pacifics, with those of a typical post-war summer Saturday. Take a look with me at the Western Section on the busy Saturday of July 29, 1939, as seen from the vantage point of Surbiton.

First of all, it is important to realise that post-war holiday traffic is heavier. On our 1939 Saturday 67 steam trains and 45 Portsmouth fast electrics were scheduled to leave Waterloo in 24 hours, whereas the summer service of 1954 showed 73 steam and 47 Portsmouth departures in the same period. Several factors have enabled the S.R. to handle this increased traffic. The five-day week has encouraged a nocturnal exodus to the West Country by the various parts of the 1.25 a.m. from Waterloo, a train which in 1939 had only just ceased to be an official secret. One of the minor results of the war has been to stimulate the Londoner to rise early to start his holiday. In 1939 only three main line trains left Waterloo before 8.0 a.m. (the 5.40 a.m. mail to Weymouth, and the 7.45 and 7.50 Portsmouth electrics), but this number had increased to thirteen in 1953 (seven steam and six electrics). Track room for the heavier long distance traffic has been found by reducing the semi-fast steam trains to and from Basingstoke, and through decreasing business travel on Saturdays.

This does not mean that the early morning of our 1939 Saturday was quiet. The up lines were occupied then, as now, by a steady stream of empty stock heading towards Waterloo from its mid-week domicile in the outer suburbs, at Esher, Walton or Woking, to form the outgoing holiday expresses. The Drummond " M7 " 0-4-4 tanks would be much in evidence on these workings, but since the war they have been displaced to some extent on the longer runs by the large " H16 " Urie 4-6-2 tanks.

The down line was also busy at this time, for with the outbreak of war only five weeks distant, strenuous efforts were being made to complete the building of the large military camp which adjoins the main line at Cove, between Farnborough and Fleet. Readers may have noticed two short grassy platforms on the steam lines just beyond this camp. This is Bramshot Halt, originally a request stop for the neighbouring golf course, but a more important station during the summer of 1939. Every day several thousand workmen were conveyed from London to this tiny halt by a series of special trains, which at one time reached the total of seven each way. Locomotives were provided by Nine Elms and Feltham sheds, usually Class " L12," " S11," " T9," " K10 " and " L11 " 4-4-0s and " U " 2-6-0s, while the rolling stock was a motley collection of old crocks, including some ex-S.E. & C. and ex-L.B. & S.C. " Balloon " first class only sets, which had become too decrepit to be used any longer on race specials. On July 29, four trains left Waterloo in quick succession shortly after 6.30 a.m., behind " T9 " No. 705, " L12 " No. 415, " L11 " No. 158 and " S11 " No. 402. As this was a Saturday, work finished comparatively early, and the special trains returned between 5.0 and 6.0 p.m.

The usual lull between the Bramshot Halt specials and the start of the heavy ordinary traffic after 8.0 a.m. was filled on this day by specials taking camping parties to the seaside and country. " H15 " No. 483 left first for Swanage, followed by " T9 " No. 119 on a special to Lymington Pier, and later there came " H15 " No. 330 bound for Exmouth. These specials were probably formed of the oldest short L.S.W.R. corridor coaches, which may still be seen being pulled and pushed along some of the most picturesque Kentish branch lines. Nowadays, organised campers are banished to an even more remote hour, and such trains as the 5.30 a.m. to Portsmouth exist largely for their benefit.

As a prelude to the real business of the day there was the day service to St. Malo, a popular 1939 innovation which has never been restored, and that July morning it ran in two portions headed by 4-6-0s Nos. 460 and 521 respectively. The rush really started with the 8.27 a.m. to Bournemouth West, usually heralded by the full-throated roar of its " Paddlebox " (No. 447 on July 29) hard at work. The main Weymouth train followed at 8.30 behind " Lord Nelson " No. 858 *Lord Duncan*, and as soon as it had vacated Surbiton's down platform its place was taken by the 8.38 to Plymouth, headed by " King Arthur " No. 780. The next portion of the 9.0 a.m.

West of England group leaving at 8.47 called at Woking instead of Surbiton, and this passed through behind " King Arthur " No. 774. The 9.0 itself had been strengthened to 14 coaches, including two S.E. & C. non-corridors, which would give No. 775 a substantial task on its through run to Sidmouth Junction. In the midst of the 9.0 group was the 8.54 to Swanage, a favourite " Remembrance " Class working, which has its equivalent to-day at 9.15 a.m., though the introduction of light Pacifics has enabled to-day's train to take the Ringwood line and avoid the congestion at Bournemouth. Another post-war development is the Weymouth train starting from Wimbledon at 9.27 a.m., which makes a leisurely journey, usually behind an " H15 " 4-6-0, but fulfils the useful purpose of picking up traffic from suburban stations and allows the Waterloo expresses to omit these stops.

Present-day S.R. enthusiasts accustomed to through Waterloo-Exeter locomotive workings, and on summer Saturdays to the regular penetration of Nine Elms engines as far into the West Country as Plymouth and Ilfracombe, may tend to forget the traditional pre-war " iron curtain " at Salisbury. It was only on summer Saturdays that it was lifted to the extent that half-a-dozen Nine Elms engines went through to Exeter, and two Exmouth Junction locomotives came up to London. One of these arrived with the Ilfracombe " A.C.E. " at 3.43 p.m., and returned home on the 6.0 p.m. from Waterloo ; it was always chosen from Exmouth Junction's allocation of " Scottish Arthurs," Nos 786-792. The second working came into Waterloo at 9.40 a.m. on a semi-fast from Salisbury and returned on the 12.9 p.m., the final portion of the " A.C.E.", serving mainly the Lyme Regis and Seaton branches. This turn was rostered for Exmouth Junction's two " Urie Arthurs," Nos. 743 and 744. However, No. 743 always seemed to share the mystery of the fabled land of Lyonesse, and despite much eager anticipation, it was always its sister which made the journey to the capital.

One service whose motive power has changed little in fourteen years is the Saturdays only working between Waterloo and Lymington Pier, where the turntable at Brockenhurst still prevents the use of anything larger than eight-wheeled engines. The 1939 workings were shared by Nine Elms and Basingstoke sheds, which both employed " U " Moguls and " L12 " 4-4-0s, though Nine Elms might produce a " T9," usually the royal engine No. 119, for the 9.40 a.m. from Waterloo. But it must be put on record that one Saturday in August, 1939, a diminutive " L11 " 4-4-0, No. 155, was called upon to tackle ten corridors and managed to complete the return trip, though the restart from Surbiton on the way back was only achieved after some savage battering at a jammed reversing rod.

On 1939 Saturdays some of the up morning steam trains approached Waterloo over the Windsor lines from Queens Road, as the up main relief line was often filled with empty trains, especially about 10.0 a.m., in preparation for the numerous " A.C.E." departures during the following hour. But no use was then made of the East Putney line, which is now followed by two steam and four up electric trains on summer Saturdays. Last summer two up Portsmouth trains were crossed to the Windsor lines at Queens Road.

Shortly after 10.20 the up non-stop " Bournemouth Limited " passed through in a flash of the brilliant and still startling malachite green ; two set trains on the Bournemouth service and several of the " Schools " 4-4-0s had been repainted in this colour. Another variation of the usual sombre Southern green was a rather sickly olive shade to be seen on several of the " Lord Nelsons " and " King Arthurs," though others of these classes were in malachite green and the majority were still dark green.

The most intensive period of down traffic commenced with the 10.24 a.m. Waterloo to Ilfracombe, hauled on this occasion by " Lord Nelson " No. 865 *Sir John Hawkins*, but a week earlier this train had been worked by " Schools " No. 931, newly fitted with large diameter chimney ; with Driver Silk at the regulator for the last time, Salisbury had been reached in 74 min. net, a feat which is recorded in Mr. Cecil J. Allen's *Locomotive Practice and Performance in the Twentieth Century*. The next down train was the " Bournemouth Belle," made up to 12 Pullmans behind " Lord Nelson " No. 864 ; nowadays, of course, the " Belle " leaves two hours later. Hard on the heels of the Pullman was the 10.35 to Ilfracombe with No. 777, the famous *Sir Lamiel*, and then in quick succession the 10.38 to Bournemouth and the 14-coach 10.41 to Padstow, in charge of 4-6-0s Nos. 773 and 332 respectively—the presence of the " H15 " indicating that Nine Elms must have been very short of power ! After the 10.45 Portsmouth electric there followed another Bournemouth train, the 10.47, " Paddlebox "—hauled by No. 444, and behind the 10.50 Portsmouth there came the 10.54 to Bude with No. 745, a " Urie Arthur." The next down express was the 11.0 itself, divided on that 1939 Saturday into Plymouth and Torrington portions headed respectively by Nos. 862 and 747. Then

"THE FULL-THROATED ROAR OF A 'PADDLEBOX'"—A pre-war picture of Southern 4-6-0 No. 459 storming through Byfleet with a relief Waterloo-Bournemouth express. [C. R. L. Coles

ensued a comparative lull, but after the four sections of the 11.30 Bournemouth group had left, there followed three more portions of the "A.C.E.", at 11.47, 12.0 and 12.9, the first of which has its present-day counterpart in the 11.45 to Exmouth; the other two have vanished to make way for the post-war "Devon Belle."

Up traffic in 1939 was fairly quiet until after mid-day, and even then there was nothing to compare with to-day's seven divisions of the 9.20 a.m. from Weymouth. The afternoon and evening, however, saw a steady flow of up expresses, including the seven portions of the up "A.C.E.", on which many of the engines from the down trains reappeared. Down traffic was also heavy, and included a service which does not figure in post-war time-tables, the 2.0 p.m. to the West of England, on which "Paddlebox" No. 462 was to be seen on July 29, 1939. "Paddleboxes" and "H15s" also took a share in the working of the group of five West of England expresses arriving in Waterloo around 6.0 p.m. and these were interspersed with a series of Bournemouth line semi-fasts, two of which stopped at Surbiton, so that the "Bournemouth Belle" was usually fortunate to achieve a punctual arrival at 6.45 p.m. on its two-hour schedule.

Mid-way through the afternoon there passed the flying-boat special from Southampton Docks to Victoria, a feather-weight train of a corridor coach, a Pullman car and luggage van, hauled by "T9" No. 282 of Stewarts Lane shed. As the connection at Wimbledon "C" Box to the Holborn line is of war-time origin, the up special in 1939 ran via East Putney and Longhedge, though the down train came via Balham and Tooting. In July, 1939, this working had only recently commenced with the completion of the Airways Terminal station at Victoria; previously the special trains had run to Waterloo and were frequently hauled by No. 571, one of the surviving Adams outside-cylinder 4-4-0s.

Boat train traffic in 1939 was often quite heavy on Saturday, due to the contemporary vogue for cruising holidays, but on July 29, it was comparatively light, with only three ocean liner departures. To-day, such traffic is not very welcome on a busy Saturday, but cannot always be avoided, and the busiest and most chaotic Saturday of 1953 (August 8) was complicated by the running of eight boat specials. Channel Islands traffic has shown a considerable increase since the war; to-day there is provision for eight up boat trains on Saturday evenings, whereas in July, 1939, we had only four, although there were then four outward and two inward trains for the St. Malo route, traffic which nowadays is handled on Fridays and Sundays instead of on Saturdays. The four up Channel Islands trains on July 29 were worked by 4-6-0s Nos. 523, 460, 2328 and 2327 respectively, but though Eastleigh now possesses a stud of "Lord Nelsons," Saturday boat trains to-day are frequently worked by the same "H15" and "N15X" class, with the help of Feltham's "S15s."

A word should be said about the semi-fast services, which leave Waterloo at a standard time of 54 min. past the hour, though on summer Saturdays these trains are much curtailed, and some are altered to start from Woking. In recent years the influx of Pacifics has caused considerable changes in their motive power, and while the number of classes used has hardly diminished, it is more representative of 4-6-0s and Pacifics than the 4-4-0s which predominated during our day's observation in 1939 when "N15" ("King Arthur"), "H15," "S15" and "T14" ("Paddle-box") 4-6-0s, "U" Class 2-6-0s, "D15," "L12," "S11," "T9" and "L11" Drummond 4-4-0s were noted.

Whatever enthusiasts' preferences, electric trains are part of the S.R. landscape, and 1939 and 1953 are alike in that Portsmouth express electrics shuttled backwards and forwards four times each hour throughout most of the day. The only changes that have been made are the diversion of two down trains to run via Cobham to Guildford, while one train is now rostered to be formed of 2-car lavatory (BIL) sets, owing to war-time losses of corridor stock. Last winter "4-RES" unit No. 3072 was destroyed by fire, a fact which may have caused the regular use of a 12-coach train of "EPB" suburban units on one Portsmouth service this summer.

Increased patronage saw the popular Portsmouth and Alton semi-fast service duplicated on 1954 summer Saturdays, with the Alton portions reaching Waterloo either along slow lines drastically cleared of stopping trains or in some cases via the East Putney loop. In 1939, however, Alton was served on Saturdays by a shuttle service from Woking; to avoid reversing on the level, up trains ran empty to Chertsey, returning from there to Woking via the burrowing junction at West Weybridge. A 1954 summer development was the running of empty Portsmouth trains in the late afternoon from Waterloo to Hampton Court, Chessington South or Worcester Park, instead of via East Putney to Wimbledon Park.

A feature of 1939 operations was the ability of Waterloo to provide fresh stock for practically every main line departure on Saturdays, excluding, of course, the Portsmouth electrics, whereas nowadays most down trains are formed of stock from arrivals with only brief turnround periods in the terminus—there is a period of three hours in the afternoon without any empty trains entering Waterloo. This may well ensure more economic use of stock; but

(*Concluded on page* 511)

Above: GERMAN "GREEN ARROW"—A 2-6-2 of the post-war West German standard design, No. 23.001, nears the Hohenzollern bridge, Cologne, with a slow train from Frankfurt.
[*G. J. Jefferson*

Inset: THE SHAPE OF BRITISH THINGS TO COME?—An Italian State Railways 2-6-0, No. 623.117, fitted with a Franco-Crosti boiler. A batch of new B.R. 2-10-0s are soon to appear with boilers of this design.
[*A. J. Smith*

THE WELLINGTON-CRAVEN ARMS BRANCHES

by G. F. Bannister

FOR many years Shropshire and the Welsh Marches have been the stronghold of numerous pleasantly rural branch lines. In fact in the early 1930s, the hey-day of the Bishops Castle Railway, the Shropshire & Montgomeryshire Railway and the Cleobury Mortimer & Ditton Priors branch of the G.W.R., this part of the country attracted all those interested in branch line working.

As each succeeding year drew to a close the branch lines began to diminish in number, trying to combat the ever increasing threat of road competition. In January, 1951, it became no longer possible to travel over the old Cambrian Railway's Tanat Valley line from Oswestry to Llangynog by passenger train. Later, on February 5, passenger services were suspended on the former Kington-Presteigne and Kington-New Radnor branches of the G.W.R., never to be reinstated, and the section from Dolyhir to New Radnor was closed completely. The years 1951-2 were disastrous for Shropshire and Herefordshire branch lines. On December 31, 1951, the former L.M.S. intrusion into Great Western territory, the Wellington-Coalport branch, was closed to passenger traffic. At the same time, the official axe fell upon the heavily-graded, picturesque section of the former G.W. Much Wenlock to Craven Arms line. Finally, in September, 1952, all services were withdrawn from the Worcester-Leominster branch between Bromyard and Leominster. One service at least still survives, however, even if precariously.

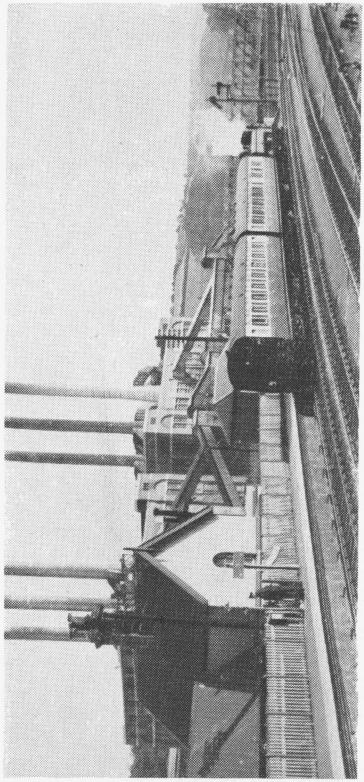
On November 1, 1864, the G.W.R. opened a branch between Wellington and Coalbrookdale ; at the same time the independently formed Wenlock Railway completed a section of line from Coalbrookdale, crossing the Severn valley near Ironbridge, to Buildwas, where it connected with the Severn Valley line from Shrewsbury to Worcester, via Bewdley and Bridgnorth. From Buildwas, the company pushed in a south-westerly direction to Much Wenlock and Presthope. The final section of the Wenlock Railway was opened between Presthope and Marsh Farm Junction, on the former Shrewsbury and Hereford Railway near Craven Arms, on December 16, 1867. In 1896 the complete line from Coalbrookdale to Marsh Farm Junction was absorbed by the G.W.R.

Both scenically and historically the 20½-mile stretch of line has much to recommend it. Climbing steeply south-westward out of the Severn Gorge at Buildwas, with ruling gradients of 1 in 40 and a series of sharp reverse curves, the branch passes through some delightfully wooded countryside, until the summit of the incline is reached near Much Wenlock (3 miles). From Wenlock, the line descends by easy stages into the head of Corve Dale, passing along the foot of the Wenlock Edge dip slope to Presthope (6¼ miles). Immediately west of the station the line tunnels beneath the limestone escarpment, reappearing at Easthope, in the pleasantly diversified agricultural vale of Ape Dale. Longville-in-the-Dale (10¾ miles) and Rushbury (12¼ miles) are small villages nestling under Wenlock Edge with historical associations going back to the pre-Norman era. At Harton Road (14¾ miles), the last station on the branch, the topography is more gently undulating and a slowly descending gradient brings the Wenlock line to Marsh Farm Junction.

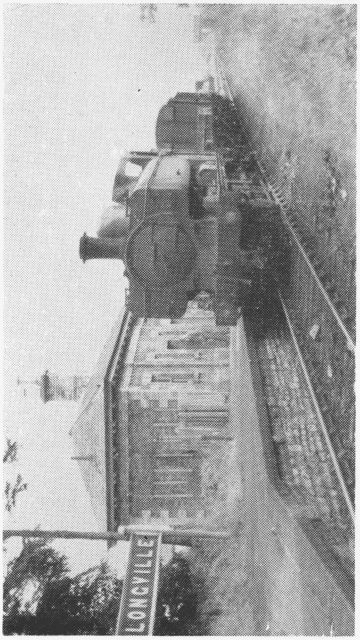
Laid single throughout its whole length, the Wenlock branch was provided with crossing loop facilities at all stations. In practice, these loops were never of much use for crossing passenger trains, for the stations consisted of single platforms only. Thus the loops were utilised principally as refuge sidings for local freight trains.

As already stated, on December 31, 1951, the Railway Executive considered it expedient to withdraw passenger services between Much Wenlock and Craven Arms and completely closed the section from Longville to Marsh Farm Junction. This decision was hardly surprising, because even in the immediate pre-war years passenger receipts on the western half of the branch were practically negligible. Furthermore, it was noticeable that the preponderance of goods traffic was always from the Buildwas end and it was not unusual to see an engine and brakevan only forming the pick-up freight between Longville and Craven Arms.

Sparseness of population was a major factor limiting passenger traffic ; but fares were costly. Moreover, a comparative study of time-tables for 1931 and 1951 shows a striking similarity between them. With the exception of an additional school train, little seems to have been done to improve passenger services for the local population over the twenty-year period, although further "halts" were provided at Easthope and at Stretton Westwood (between Presthope and Wenlock). On the eastern section, a competing road service between Wellington and Much Wenlock is rapidly killing rail passenger traffic, and



BUILDWAS JUNCTION, with the Ironbridge power station in the background. The Much Wenlock-Wellington branch train pauses hopefully. (25/9/54). [*G. F. Bannister*



THE END OF THE LINE — W.R. 0-6-0 PTNo. 3732 arrives at Longville with the daily goods from Much Wenlock. (25/9/54).

already rumours of passenger service withdrawal are rife in the area.

At the present time, the single line between Buildwas and Much Wenlock is worked by electric train staff, while the western portion of the branch remaining open is worked by a staff of the wooden type. Great care is needed in operating trains over the heavily-graded sections and through the numerous gated crossings. There are six gradients of 1 in 40, involving a stop board at the summit of the Wenlock incline. Speed restrictions of 15 m.p.h. are operative at many points, while a maximum speed limit of 45 m.p.h. is imposed on the branch as a whole.

During the late war an enormous underground petrol storage dump was established at Farley, between Buildwas and Much Wenlock, and consequently during this period certain locomotive weight restrictions were relaxed on this section of the line. It became possible for engines of the "Red" Group, with the exception of the "47XX" Class, to work Government traffic between Buildwas and Farley, whereas previously the heaviest types allowed were the "51XX" Class 2-6-2 tanks of the "Blue" group, working Wellington-Much Wenlock passenger trains. As a rule, it was found more profitable to work two or three trips with the smaller locomotives than to attempt a single journey with one of the heavier classes. The latter often needed banking assistance in damp weather, when fallen leaves made the gradients extremely slippery. The western half of the branch was, and still is restricted to all but the "Uncoloured" and "Yellow" group locomotives ; yet even in this latter group the "2251" and "45XX" types are excluded. Furthermore, over the entire branch, "Yellow" group locos unassisted are limited to loads of 125 tons.

Since the withdrawal of passenger services from the western section of the line, many locomotives familiar to former travellers have disappeared. Reference must be made here, of course, to the small-wheeled, lightweight 2-6-2 tanks of the "4400" Class. Of the ten locomotives of this type constructed by the Churchward régime at Wolverhampton in 1905, (No. 4400 was built at Swindon) no less than six were once stationed at Wellington for local branch line working, and more especially the Wellington-Craven Arms line ; they were ideal for working passenger services over this difficult route. After closure, the four locomotives still remaining at Wellington were transferred to depots in the south-west of the system, the motive power sub-depot at Much Wenlock being closed down completely.

At the time of writing both Presthope

and Longville stations remain open for goods traffic, but the life of this 7¼-mile stretch of line is hanging by a mere thread. A morning pick-up freight wends a leisurely way from Much Wenlock to Longville and back each day whilst until recently it was not unusual to see a "36XX" Class pannier tank and a two-coach train standing in Longville station every evening at 5.0 p.m. Unfortunately, this train was discontinued with the commencement of the 1954 winter timetables. It was officially termed a parcels train, being a continuation of the 3.10 p.m. passenger from Wellington to Much Wenlock and for a time it carried a specialised traffic of mushrooms from Longville to Wellington for distribution to the urban centres of the Midlands. If the guard felt kindly disposed towards a potential passenger it was therefore still possible to travel over this section of line by passenger coach two years after the withdrawal of passenger traffic.

To-day a mixed train is a rarity on the W.R., but one can be seen on the Wenlock line, provided one gets up early enough, for the 6.48 a.m. ex-Wellington passenger train is usually mixed between Buildwas and Much Wenlock. When conveying loads of up to 140 tons including a goods brakevan, an allowance of eighteen minutes is given between the two stations instead of the more normal fourteen. A further mixed train runs between Ketley Halt and Much Wenlock on Saturdays only, leaving the former station at 12.45 p.m.

Even after complete closure, the extreme western section of the Wenlock Railway was still to have some claim to railway fame. In July, 1953, the Royal Train was accommodated for the night between Marsh Farm Junction and Harton Road, during the Queen's tour of the Principality. Since then the track has rusted and the metals have become overgrown ; it can only be a matter of time before complete abandonment becomes a reality.

SOCIETY COLUMN

THE RAILWAY CLUB

ON October 2, Mr. T. S. Lascelles addressed members on "The Evolution of the Block Telegraph." The speaker began by describing some of the early instruments, introduced in 1837 onwards, and pointing out how the lack of knowledge of magnetism was a handicap in those days ; it was not until 1863 that Spagnoletti overcame the effects of lightning on the instruments. Standardised bell codes were adopted by most railways in 1895, a notable exception being the L.S.W.R. On the following day a party of members toured the Carriage and Wagon Works at Wolverton ; after lunch in Wolverton, a visit was paid to the Newport Pagnell branch in the afternoon. The Club has its next ordinary meeting at 57 Fetter Lane, E.C.4, on December 3 at 7 p.m., when Mr. M. D. Greville will speak on "The Railways of Manchester and District."

THE RAILWAY ENTHUSIASTS' CLUB

AMONG the visits arranged during September and October were the Longmoor Military Railway, Waterloo signalbox, and the preserved locomotives and coaches at Salisbury. On October 9, a party of members were guided over the sleeper and track works at Redbridge by the Assistant Works Manager, Mr. Baker. This proved to be a very interesting and unusual trip, and was followed in the afternoon by visits to the control room and the signalbox at Southampton Central Station. On October 23, the ultra-modern box at Stratford, Eastern Region, was found to be the most impressive of all those yet visited. The following day (Sunday) the old Aveling and Porter locomotive at Waddon Gasworks, Croydon, was specially steamed (the first time for at least twelve months) for the R.E.C. party. The December programme includes visits to Three Bridges Electrical Control Room (December 4) ; Durnsford Road (Wimbledon) electric car shops and power station (December 11) ; and Wimbledon signal works and box (December 18). Further visits are to be to Stratford Works and the Post Office Tube Railway (January 4) ; and Ashford Works (January 8).

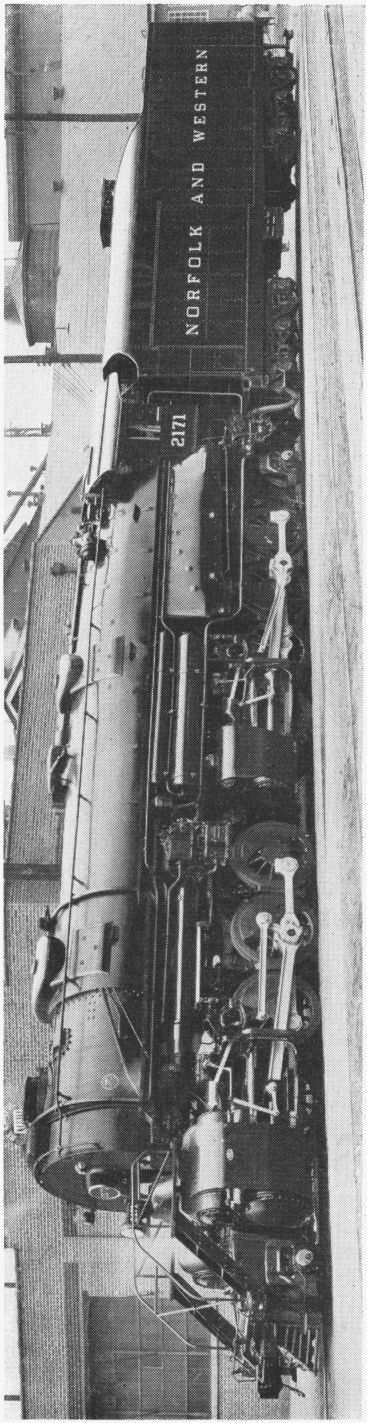
The clubroom is situated 100 yards east of Farnborough Station, overlooking the main line from Waterloo, and is open to visitors every Wednesday and Friday evening, and all day on Saturdays and Sundays. Details of membership, the events programme and sample copies of the magazine (1s.) are available from the Hon. Secretary, H. Davies, "Lynmouth," Sycamore Road, Farnborough, Hants.

WESTMINSTER BANK RAILWAY SOCIETY

AT the Annual General Meeting held at 52 Threadneedle Street on October 11, the Chairman, Mr. H. W. J. Wright, stated that the Society in its first year of existence has increased its membership from 4 to nearly 100 members. Several successful outings have been held, particularly to Swindon Locomotive Works by special diesel train, to Romney, Hythe & Dymchurch Railway and to various railway installations in the London Area. Speakers have included such well-known railway personalities as Messrs. D. S. M. Barrie, George Dow, J. N. Maskelyne, H. A. Vallance, D. A. Boreham and O. S. Nock. Mr. C. D. Hely-Hutchinson, a Director of the Westminster Bank and a fellow enthusiast, has accepted the Presidency of the Society. A recent successful outing of the Society (October 17) was by diesel railcar from London to Southampton Docks and thence by a chartered steamer, M.V. *Vecta*, on a 2-hour cruise around the dock area, Calshot and Fawley refinery.

STEPHENSON LOCOMOTIVE SOCIETY

AMONG fixtures arranged for members during November were visits to Swindon works and shed, also to the motive power depots at Stratford, Willesden, Camden and Old Oak Common. At indoor meetings at the London headquarters, Kensington, W.14, as well as at ten provincial centres, where prospective members or friends are welcome, announced subjects and speakers included : "Locomotive Performance" by Dr. W. A. Tuplin at Birmingham ; "An Enthusiast Recollects" by Mr. Stewart Dewsberry at Manchester ; "A Great Western Miscellany" by Mr. P. J. Garland at Sheffield ; "Impressions of French Railways" by Mr. W. Dendy at Newcastle-on-Tyne ; "Rail Fans over the Water" by Mr. J. B. Aird in Glasgow ; and "Railway Shots" (Ciné film show) by Mr. W. A. Camwell, inaugurating a new centre at Bristol. On the occasion of the first London general meeting of the 45th autumn season, the Society's Publicity Officer, Mr. R. A. H. Weight, in a talk entitled "Behind the Scenes on the Midland, 1907-10," described for the first time many of his experiences and impressions as a junior member of the District Traffic Superintendent's staff at St. Pancras. *General Secretary* : H. C. Casserley, Ravensbourne, Berkhamsted, Herts.



Weights : Engine 260 tons, Tender 169 tons | Cylinders : H.P. (High pressure) 25 in.x32 in., L.P. (Low pressure) 39 in.x32 in. | Dr. wheel diam. 4 ft. 10 in., Boiler pressure 300 lb., Grate area 106.2 sq. ft. | Heating Surfaces : Evaporative 4,915 sq. ft., Superheater 1,478 sq. ft. | Tractive Effort : Simple 152,206 lb., Compound 126,388 lb.

OUTSTANDING U.S. LOCOMOTIVES—10

The Norfolk & Western 2-8-8-2 Compounds

—by H. M. LE FLEMING—

M.A., A.M.I.Mech.E., M.I.Loco.E.

IN the period 1912-1925 the 2-8-8-2 compounds were the "Monarchs of all they surveyed" in the way of freight locomotives over almost the whole of the U.S.A. Often and aptly referred to as "Battleships," they could always be found where steep grades and heavy traffic abounded. Now, alas, their thunder has largely departed and with it much of the spectacular romance of railroads.

The Norfolk & Western Railway (*not* Railroad) was unique in building this type continuously up to 1952. In fact from 1918 their 2-8-8-2s form an unbroken series of improved editions of the original design and all bear a strong family likeness. The cylinder sizes were the same for all and so was the driving wheel diameter, except for Class "Y2a," on which it was 1 inch less. All were built at the Company's Roanoke shops or by the American Locomotive Co., as follows :

Class	*Numbers*	*Builder*	*Date*
Y2a	1701-30	Roanoke	1918-24
Y3	2001-49	Alco	1919
Y3a	2050-79	,,	1923
Y4	2080-89	,,	1927
Y5	2101-19	Roanoke	1930-32
Y6	2120-54	,,	1936-40
Y6a	2155-70	,,	1942
Y6b	2171-2200	,,	1948-52

Classes "Y2a" to "Y4" had 270 lb. boiler pressure and Class "Y5" onwards 300 lb. Outside bearings to the trailing pony truck first appeared on the "Y6" Class. The engine weight of the "Y2a's" was 235 tons and this has steadily increased up to the present figure of 260 tons.

It will be seen that the boiler pressure has always been high and that the original cylinder ratio was well chosen, since it has remained unaltered throughout. These features have contributed, no doubt, to the great success of these engines, which have done yeoman work not only on their own system, but during the last war on a number of other railroads as well.

"Y6" engines are loaded up to 13,000 tons behind the tender on the easier sections where the ruling grade is 1 in 330 and the curvature light. With such a train the running speed would be 25-30 m.p.h. with 60 per cent cut-off in the h.p. cylinders and 55 per cent in the l.p. At starting and low speed up to 4 m.p.h. the simpling valve admits boiler steam at reduced pressure direct to the l.p. cylinders and at the same time by-passes the h.p. exhaust direct to the chimney. The two valve gears are linked together, but arranged with the l.p. cut-off about 5 per cent less than the h.p., a system which produces very even power output in the two sets of cylinders.

The boilers have very wide fireboxes with grates 8 ft. 10¼ in. wide and the tube length has been kept down to 20 ft. In order to clear the swing of the l.p. cylinders the circular portion of the smokebox is short and this has given rise to a most unusual feature, in that the axis of the chimney and blast pipe is inclined forward 10 degrees to enable the exhaust to clear the large superheater. The top of the chimney, of course, is horizontal, but the slant is distinctly noticeable from the side and has often puzzled keen observers.

The h.p. piston valves are 14 in. diameter and the l.p. no less than 18 in. ; a by-pass is also fitted with the latter. All axles have roller bearings and the maximum axle load is 32 tons. The rigid wheelbase of each engine group is only 15 ft. 9 in. and for the engine as a whole 58 ft., whilst the total length of engine and tender over pulling faces of couplers is 114 ft. 10½ in.

Tenders hold 22,000 gallons of water and 27 tons of soft coal. The small cabin at the back of the bunker is for the brakeman ; I do not know whether binoculars are supplied, but they would be useful, since the tail end of the train is usually 1½ miles away!

During the war fifteen " Y2a's " were sold to the Denver & Rio Grande Western and two to the Bingham & Garfield, and of the " Y3s " eight went to the Santa Fé, six to the Pennsylvania and five to the Union Pacific. In 1948 seven of the Santa Fé engines were again sold to the Virginian Railway and so returned to their native haunts in the Allegheny Mountains.

I am very grateful to Mr. R. G. Henley and Mr. C. E. Pond, former and present General Superintendents of Motive Power of this famous railway, for kindly supplying information on their locomotives.

LETTERS TO THE EDITOR

BEWARE OF C.J.A. !

To the Editor of " Trains Illustrated "

SIR,—It would appear from the correspondence columns of your November issue that I am getting into hot water, if not into superheated steam. I will refer first to Professor Tuplin's disclaimer of any responsibility for the *dictum* that " no locomotive needs more than 180 lb. working pressure " (July issue, p. 273). It is certainly correct that he did not say so in these terms in his paper " Some Questions about the Steam Locomotive " read before the Institution of Locomotive Engineers. But he did say this : " The fact that (for a specific effort less than 0·27) a locomotive designed to work at 250 lb. per sq. in. suffers only a few per cent loss in efficiency when worked at 180 lb. per sq. in. suggests the question as to how little the disadvantages would be in a locomotive specially designed to do the same work at the lower pressure. Such a locomotive would need a greater cylinder volume in order to achieve the same nominal tractive effort as the 250 lb. engine. Fig. 4 provides the answer to this question." In the limited confines of this letter it is not possible to reproduce the graph in question nor the detailed comment on it, nor to go into the lengthy explanation of the term " specific effort," for which the reader must consult the *Journal of the Institution of Locomotive Engineers*, No. 236 ; it is the conclusions that the Professor draws from the graph with which we are concerned.

" This shows," we read, " that the high pressure engine has no advantage exceeding 5 per cent ; in the normal running range it is less than 3 per cent. Even this small advantage is likely to be neutralised by the greater leakage losses at 250 lb. than at 180 lb. Gresley's comparison in 1928 between Pacifics at 180 and 220 lb. showed exactly this result, and Goss deduced it from his own test figures. Comparison between L.M.S. ' Royal Scot ' and ' Patriot ' 4-6-0s showed the same result (Cox : *A Modern Locomotive History*, J.I.Loco.E., No. 190). Table I shows that the 180 lb. boiler may be some 15 per cent lighter than the other, or, conversely, that for any permissible weight the lower pressure permits of a boiler of some 15 per cent higher power capacity." Under the heading " Useful Theorem," the Professor goes on to say : " If the cylinders of a locomotive are not so large as they might have been, then the locomotive is heavier than it need have been, because it could have been designed for a lower working pressure and therefore a lighter boiler of the same power."

Elsewhere in his paper, under the heading " Change in Steam Chest Pressures," Professor Tuplin says : " Fig. 5 shows that although the efficiency curve for throttled steam lies generally below that for maximum steam chest pressure, the effort produced with 250 lb. steam chest pressure and 16 per cent cut-off is equalled in the same engine by 180 lb. steam chest pressure and 28 per cent cut-off at only 3 per cent extra cost in steam. The engine may actually work more reliably in the second condition because that extra 3 per cent of the initial energy in the exhaust may make a great difference in the steaming. It means (very approximately) that the back pressure is raised from 20 to about 22 lb. per sq. in., blast nozzle pressure is raised (say) 19 to 21 lb. per sq. in. and the excess over atmospheric pressure from 4·3 to 6·3 lb. per sq. in., a gain of some 25 per cent in draught-producing power."

The foregoing passages certainly do not state in as many words that " no locomotive needs more than 180 lb. working pressure," and in disclaiming any such interpretation the technician can, of course, hedge himself round with all kinds of reservations and qualifications, as, for example, that there are compound, turbine, and other specialised forms of the steam locomotive to which the quoted references to working pressure in the paper do not apply. But the paper dealt throughout with the steam locomotive in its traditional form, and in these conditions I must leave readers to judge for themselves what other deduction is possible than the one which I have drawn.

Further, the *Bishop Leofric* design which Professor Tuplin " introduced " in the April, 1954, issue of *Trains Illustrated*, had a working pressure of 180 lb. As it was plainly suggested in this article that this corpulent ecclesiastic represented an improvement on Churchward practice, it is difficult to avoid the conclusion that all our British locomotive engineers from Churchward's time onwards, Collett, Gresley, Fowler, Stanier and Bulleid included, have been sinning against light in building locomotives with working pressures of from 220 to 280 lb. per sq. in. But many of those who discussed the Professor's paper at the various centres at which it was read were far from agreeing with his contentions, and on certain of his statements there were even such comments as " unsound " and " misleading."

I am greatly indebted to Mr. P. W. B. Semmens for putting me so firmly in my place as he does in his letter in the same issue, though I cannot quite grasp what bearing my abysmal ignorance of " mechanical principles " has on a matter which is clearly thermal. In the paragraph in my letter to your September issue which refers to *Clifford Castle's* climb of Hemerdon bank, I doubtless exaggerated in claiming it as virtually impossible for the boiler to find steam to work continuously at 75 per cent cut-off (I have known even the technicians similarly to exaggerate in order to prove a point, and could readily quote some interesting examples). But the reader of reasonable intelligence would, I think, realise that I was writing of normal running and footplate conditions, considerably removed from the official " Britannia " tests to which Mr. Semmens refers, in which reference (to maximum boiler output) he has conveniently ignored the fact that the " Britannia " was being fired by *two firemen* working at full stretch !

Referring to the letter from Professor W. A. Tuplin in your September issue, concerning the alleged 120 m.p.h. attained by Great Western 4-6-0 No. 2903 when running light, the suggestion is made that because of a certain apprehension on the part of some of us who were riding in the " Silver Jubilee " on her test trip of September 27, 1935, the speed figures recorded on the latter were no more reliable than that claimed on the former occasion. To which my reply is (1) that Mr. C. B. Collett, who was himself riding on No. 2903, expressly stated that " the timing could not be regarded as accurate " ; (2) that, so far as the competence of the observers is concerned, even the worst oscillation inside a train would not even approach that on a locomotive running light at these enormous speeds ; and (3) that the " Silver Jubilee " maximum speeds are supported by detailed passing times and station-to-station average speeds. As to the " ⅛ " in " 112½ " m.p.h., this does not " imply an ability to distinguish between 112 and 113 m.p.h.," but arises from the elementary fact that the average speed over ¼ mile covered in 8.0 seconds *is* 112.5 m.p.h., and that so to describe it is more accurate than to render it as either 112 or 113 m.p.h.

Finally, Professor Tuplin's comment in this second letter on my use of the expression *suppressio veri* is the remark, " I am suspicious of any thought that cannot be expressed in English." Nevertheless I am intrigued to note, on p. 703 of *Journal No.* 236 *of the Institution of Locomotive Engineers* that the Professor, in one of his replies in the discussion on his paper, used the words *reductio ad absurdum*. Is this English ? Or is Jove nodding for once ?

Hatch End. CECIL J. ALLEN.

COUNTRY PEOPLE

Above : Isle of Wight Class " O2 " 0-4-4T No. W34 *Newport* takes the evening air near Merstone with the 5.8 p.m. Newport-Sandown train. (4/9/53). [*K. W. Wightman*

Below : W.R. 2-6-2T No. 5542 sets out of the South Devon junction of Brent with the 12.24 p.m. branch train to Kingsbridge. In the yard, is 0-6-0PT No. 1608 (31/8/54). [*J. F. Oxley*

To the Editor of "Trains Illustrated"

SIR,—Mr. P. Smith states that a three-cylinder locomotive "always has at least two-thirds of its power available" (for starting). I think this is doubtful. For one thing, the average 3-cylinder locomotive cuts off fairly early even in full gear, and for another it is fitted with Walschaerts gear, which gives full lead in all positions of the reverse. Therefore it is common for a 3-cylinder engine to stop in such a position that one piston is nearly at the end of the stroke and getting "lead" steam (which tries to push it the wrong way), the second is just about at the point of cut-off or at least getting a very restricted port opening, and the third is in a good position. Assuming the one almost at cut-off is counteracted by the one on lead steam, that leaves only one-third of the calculated power of the engine available. The definite advantage of Stephenson gear for stopping trains is the absence of lead when the gear is "right down."

As for the increased weight that the driver has to lift when reversing a Stephenson gear locomotive, this is offset by balance weights on the shaft, and "lash" of coupling rods is less, not more, with divided drive.

Finally, how can the frame stresses be *more* unequal with divided drive, and what is so "clumsy" about a G.W. crosshead? Of all the suburban tank engines, has there ever been a more certain "starter up" than a G.W.R. 2-6-2 tank? Granted that these engines have other advantages, such as long stroke cylinders and lubricated regulator valves, the fact remains that they are 2-cylinder Stephenson gear engines and that they always move the instant the regulator is opened.

Wincanton. KENNETH ARNOTT.

THE FURNESS RAILWAY

To the Editor of "Trains Illustrated"

SIR,—As the son of a stationmaster on the Furness line, a railwayman myself, and one who knows the line intimately from very intensive and observant travel on it, may I correct Mr. McGowan Gradon on these points:

(1) The fact that the first train on the F.R. conveyed slate can hardly be described as odd, since the slate quarries at Kirkby—the original terminus of the F.R. "main line"—were largely responsible for the promotion of the railway.

(2) The southern portion of the Lancaster & Carlisle was surely already in traffic, at least as far as "Kendal Junction" (Oxenholme), long before the F.R. opening.

(3) The statement regarding the M.R. & F.R. joint services via Wennington is misleading and requires some amplification. The timetables at the opening of the joint line in 1867 (which, incidentally, still show the Midland services to and from King's Cross via Hitchin) show two stations at Carnforth at which all trains stopped. One I have been unable to locate accurately, but it seems likely that it was to the south of the present main line station, at or near the non-existent mile-post zero of the F.R. The site of the other near the present "Furness & Midland Junction" signalbox would seem to show that the line which gave Midland trains a through run on to F.R. metals was, in fact, the original line to Wennington, and not a mere spur. I am unable to say when the present Carnforth station and layout were brought into use. The through M.R. train to Barrow Docks continued to run at least until 1909, though after the opening of the M.R.'s own port at Heysham the steamer service was reduced to three sailings a week via Barrow. By this time the name of (Belfast) "Boat Train" was bestowed on a later train from Carnforth *station* to Whitehaven (through portion from St. Pancras to Whitehaven on Saturdays). The name still clings to the 6.38 p.m. Lancaster-Workington train, which travels the F.R. main line at approximately the same time as this latter-day "Boat Train."

(4) In normal times (i.e. apart from the 1914 war and a few years subsequently) the service on the Arnside-Hincaster Junction section varied between five and seven passenger trains daily. It still carries one "regular" all-the-year-round passenger working on alternate Thursdays between Ulverston and Durham in connection with the Miners' Convalescent Home at Conishead. On summer Saturdays, a Windermere-Carnforth service uses this route, and a return service is given but not advertised from Arnside to Oxenholme. The coke trains originate in the Bishop Auckland-St. Helens Auckland area.

(5) There was never a halt at Meathop, only a signalbox. A closed halt (for service personnel) still stands intact at Wraysholme crossing, between Kent's Bank and Cark.

(6) Grange is 9 m. 18 ch. from Carnforth. Unfortunately, like all "official" distances on the Furness line, a pinch of salt might come in handy here.

(7) I have been unable to establish that the workshops at Cark ever saw regular use; certainly they were intended, and may well have been used, notwithstanding.

(8) Mr. McGowan Gradon refers to a direct spur on to the Lakeside branch! *The physical connection was taken out at least six years ago*, and it has certainly never been used since the end of the war. Down trains for the branch now have to reverse at Ulverston.

(9) Mr. Gradon contradicts his earlier writings as to which way the junction between the Dalton, Kirkby and Rampside lines of the F.R. originally faced. I am so far unable to establish correctly what the position was.

(10) The Yarlside mines were still working enough to require a rail service as recently as 1952/3. I have no subsequent Trip Notice for the Barrow area.

(11) The trailing connection at Salthouse Junction is with siding lines only. The Piel branch (beyond the point to which it is used as a siding) is completely dismantled.

(12) From St. Luke's Junction to Barrow Central is double-track *only*. There is for a short distance a siding, followed by a running loop on the down side, which may give the impression to a traveller of quadrupling. The continuation N.N.W-wards beyond Barrow Central before the line swings away is about one mile, not a quarter. For Hindpool, as the point of the former junction, read "Ormsgill." Hindpool is *on* the goods lines in the dock area.

London, S.W.5. F. N. SWIFT.

To the Editor of "Trains Illustrated"

SIR,—The North Lonsdale Ironworks ceased operation just after the war and Glaxo Laboratories took over, rebuilding the premises for the production of penicillin and streptomycin. The line beyond the works to Conishead Priory has been dismantled; the signalbox at the works was recently removed and re-erected at Cark.

R.E.M.E., Honiton. M. B. ATKINSON.

To the Editor of "Trains Illustrated"

SIR,—I have never yet heard of Lindal tunnel being called Crooklands. This tunnel, which was originally built for single line in June, 1851, was of rather small dimensions, 14 ft. 6 in. high and 12 ft. wide. Due to an increase of traffic in 1854, it was decided either to enlarge or to open out this tunnel, but the latter was found to cost more than enlarging. Widening was completed in November, 1856. Mr. McGowan Gradon states that this tunnel was unlined until 1923. I beg to differ; of a total length of 460 yards 123 yards were unlined and 337 yards were lined with limestone rubble masonry.

I think mention should have been made about the goods engine which disappeared near Lindal, and was never seen again; the driver and fireman jumped off in the nick of time. This incident was, I believe, due to mining operations.

Birmingham, 10. D. IBBOTSON.

JUNCTIONS GALORE

To the Editor of "Trains Illustrated"

SIR,—Regarding a letter on "Junctions Galore" which you have printed, I would like to say that the train from Aberdeen to Kirriemuir to which I referred was the 8.15 a.m. ex-Aberdeen, due in Forfar at 10.18; the Kirriemuir connection left at 10.20 a.m. I do not believe in guessing, but I am almost sure that I did see in some timetable in C.R. days the notation "arrive Kirriemuir 10.31 a.m.", but I am now unable to trace it.

Glasgow, GEORGE ROBIN.

SOUTH AFRICAN LOCOMOTIVES

To the Editor of " Trains Illustrated "

SIR,—I was very interested in the article dealing with the new Class " 25 " locomotives recently built for the South African Railways (*October issue*). However, there appears to be a mis-statement in the weights quoted. You say that the new 4-8-4s are just a ton heavier than the Class " 15F " 4-8-2s, whereas, according to official drawings, the weight (engine only) of the last batch of Class " 15F " (mechanically stoked) is 113 tons 6 cwt. ; earlier non-stoker-fitted batches weighing 108 tons 12 cwt., 108 tons 18 cwt., 111 tons 3 cwt., and 111 tons 12 cwt. The Class " 23 " 4-8-2 weighs (without tender) 110 tons 19 cwt. (first lot) and 111 tons 2 cwt. (second lot) and the respective tenders 104 tons 5 cwt. (9,200 gallons) and 107 tons 14 cwt. (9,500 gallons). Against these the new 4-8-4s (non-condensing) weigh 119 tons and the condensing series, 121 tons.

When it is considered, as the writer says, that these huge machines are run on 3 ft. 6 in. gauge and 80 lb. rails, with sharp curvature and a restricted loading gauge in some ways, it seems a credit to the boldness of the C.M.E. who commenced the 4-8-2 designs on the S.A.R.—I think it was the late D. A. Hendrie—not so long after the Boer War.

These engines, however, all had wheels of small diameter for heavy pulling and I think the real precursors of the " 15Fs," " 23s," and " 25s" of both series were the American-built Classes " 15CA " and " 15CB," both of which were rebuilt with larger wheels (increased in diameter still further after some years' satisfactory service) and higher-pitched, wide firebox-type boilers. The steps by which the size of the later 4-8-2s increased to the ultimate maxima of the " 15Fs " and " 23s," so that a 4-8-4 class became inevitable, may be easily recognised by comparison of the relevant data. A point worth noticing is that when the American " 15CAs " were rebuilt to take 60-in. coupled wheels, they were also given cylinders one inch larger in diameter, thus attaining the figure of 24 in., which is still used by the latest Class " 25s " and, I presume, could not be increased by the designers because of loading gauge restriction, to say nothing of hammer-blow, etc.

I think there is a slip in the reference to the Class " GL " 4-8-2 + 2-8-4s. When built, these engines were given four equal cylinders of 22 in. × 26 in. and not two 22 in. and two 18½ in. An alteration may, of course, have been made, but I notice, that the T.E. figure (at 75 per cent boiler pressure) fits exactly with four cylinders 22 in. × 26 in., 48 in. drivers and 200 lb. per sq. in. pressure, so that mention of 18½ in. cylinders appears to be incorrect.

Sidcup, Kent. H. S. F. SCULLEY.

We regret that in the editing of Mr. R. C. Riley's article on the Crystal Palace stations in our October issue, we assumed that the figures of bun and beverage consumption quoted in connection with the 1851 Exhibition applied solely to the station Refreshment Rooms, which was not the case. Elsewhere, an unfortunate insertion placed Factory Junction at Brixton; it is, of course, at Battersea.

THE 1954 " T.I." PHOTOGRAPHIC COMPETITION

PRESUMABLY the appalling summer is chiefly to blame for the disappointing standard of entries in our 1954 Competition, so many of which seemed to have been taken with rain brewing. The judges were soon in agreement on the first three awards, but the rest of the list was decided only after the most lengthy discussion and secret ballots, the results of which showed wide divergences of opinion amongst the panel over some prints. In general criticism of the entries was that, firstly, a number of good pictures were spoiled by bad printing and over-emphasising of the sky. Several prints were disfigured by " halos," with excessively dark, over-emphasised skies (which oddly lightened where trees intervened and the network of their branches made it tiring to continue the " printing in " !), and these were often thrown grossly out of balance by very light foregrounds. Many of the entrants who elected for original angles neglected to observe the elements of good pictorial composition. In other cases, it was noticed that definition was bad on side of the picture, indicating that the lens was not set accurately parallel to the plane of the lens or plate, a common fault in many modern cameras, and especially the less expensive ones of German origin.

Mr. Anderson gained first prize for an excellent railway photograph of an unhackneyed subject in which everything contributes to the picture as a whole ; the line of the exhaust going high over the tree was a lucky chance in this respect. The print is well balanced and critically sharp, and tone values are excellent. The charming sylvan scene captured by Mr. Ivo Peters is also out of the common run, and was a very close contender for the first award. Composition is excellent and the print was of beautiful quality and definition. The third prizewinner shows an enterprising approach, full of action—note the alert position of the driver—and especially notable for a picture taken in mid-winter (New Year's Day). The only criticism of Mr. Fish's picture is that all the heavy weight of the dark tones is on the right-hand side, although the eye is certainly led into the picture quite easily by the lines converging from the left ; a little darkening of the coach-end in printing would probably have remedied this. Mr. Nash's consolation prizewinner was very nearly in the first three, but there was too much empty foreground (some of which we have cut for reproduction) and it needed " printing in " to give the picture a darker base on which to stand. All these pictures appear on the next two pages ; other winners will be reproduced in later issues and discussed when they appear.

The Prize List

FIRST PRIZE
W. J. V. ANDERSON, Leslie, Fife.

SECOND PRIZE
IVO PETERS, Bath.

THIRD PRIZE
DAVID S. FISH, Churston, Devon.

CONSOLATION PRIZES
S. C. NASH, Eastbourne.
J. E. WILKINSON, Tebay.
N. W. SPRINKS, Tunbridge Wells.
Rev. A. W. V. MACE, Rugby.
R. K. EVANS, Hessle, Yorks.

DR. DAY'S BRIDGE, BRISTOL

IN one of his recent locomotive articles, Mr. Cecil J. Allen, having occasion to remark on passing Dr. Day's Bridge Junction, between Temple Meads and Stapleton Road stations of the Western Region in Bristol, inquired as to the identity of " Dr. Day " and how this medico came to have a bridge named after him. We are indebted for the answer to Mr. L. W. Slaughter, who says that the connection is explained in a book by W. T. Sanigar, entitled *Leaves from a Barton Hill Notebook*. It appears that the first resident doctor in the Barton Hill district of Bristol was William Edward Day ; at first he lived at Belle Vue, but he moved later to the top of Barrow Road ; when the cutting was excavated for the Bristol-South Wales line of the Great Western Railway, a road bridge was needed at a point adjacent to the doctor's house, and received the name of Dr. Day's Bridge, possibly because it was regarded as facilitating the worthy man's access to his patients on the opposite side of the railway. The junction almost immediately under the bridge, between the lines from Temple Meads and the Bath direction respectively to Stapleton Road and beyond, thus has always carried the cumbrous title of " Dr. Day's Bridge Junction."

Above right : FIRST PRIZE—Class "D40" 4-4-0 No. 62267 leaves Craigellachie with a Speyside train. (5/4/54). [*W. J. V. Anderson*

Above left : SECOND PRIZE—The narrow gauge 0-4-0T *Quintus*, built in 1914 by Manning Wardle and owned by Pike Bros., Fayle & Co. Ltd., of Wareham, Dorset. (11/8/54). [*Ivo Peters*

Below left : THIRD PRIZE—W.R. "King" Class 4-6-0 No. 6023 *King Edward II* approaches Dainton tunnel with the up "Cornish Riviera Express." (1/1/54). [*D. S. Fish*

Below right : CONSOLATION PRIZE—S.R. Class "0298" 2-4-0WT No. 30585 near Penhargard with the 10.30 a.m. Wadebridge-Wenford Bridge goods. (3/9/53). [*S. C. Nash*

THE 1954 "T.I." PHOTOGRAPHIC COMPETITION

62267

Above : GETTING HOLD OF THEM—W.R. " Hall " Class 4-6-0 No. 5960 *Saint Edmund Hall* starts the 10 a.m. Paddington-Oxford-Wolverhampton train out of Leamington. (19/9/53). [*R. J. Blenkinsop*

Below : COLD SNAP—W.R. 2-6-0 No. 5370 rolls an empty wagon train downhill through Harbury cutting towards Leamington in icy weather. (12/52). [*R. J. Blenkinsop*

MOTIVE POWER MISCELLANY

LONDON MIDLAND REGION

THE winter service has not brought about any major changes in the workings on the Western Division as described in the August and September issues. The most interesting amendment is that affecting the new 1.35 p.m. Euston to Perth and 12.12 p.m. Perth to Euston. These trains are worked by an Upperby (12A) Class "7" between Carlisle and Euston. In addition, the Camden top link now has a daytime working to Carlisle, which it has been trying to get for a long time; Camden men work the 1.35 p.m. (MWFO), returning with the up "Royal Scot" (TThSO), while Upperby men work up during the day on the "Royal Scot" (MWFO) and the 12.12 p.m. ex-Perth daily and return north on the down "Royal Scot" (MX, but also Sundays) and the 1.35 p.m. (TThSO). Consequently, the Blackpool engine and crew which formerly worked the 1.35 p.m., now work to Crewe on the 12 noon and take over the Blackpool portion of the 1.35 p.m. at Crewe, except on Fridays, when the Blackpool train runs independently from Euston at 1.42 p.m.

On the Manchester services, the solitary Camden engine now works the 4.30 p.m. (SX) and 5.40 p.m (Sunday) ex-Euston and the 8.20 a.m. daily from London Road. Longsight engines, therefore, work the 9.45 a.m. and 10.5 a.m. ex-London Road; this rearrangement allows the use of a Class "6" engine on the second working (there are also some slight amendments to the Sunday return workings). The normal winter adjustments to the crew workings mean that Longsight men work the 2.45 p.m. ex-Euston on Saturdays (in place of the 12.37 p.m.), leaving Camden on Saturdays with only the 3.45 p.m. down and on Sundays the 10.5 a.m. up: Camden men work the down "Mancunian" on Fridays, as well as on other days, returning on the 12.5 p.m. ex-London Road on Saturdays, leaving the 10.45 p.m. on Friday for Longsight men as on other days of the week. On Mondays, Longsight men work the up "Mancunian" instead of the 10.5 a.m., which is now dealt with by Camden.

Some amendments have been made to the engine workings on the Wolverhampton service. As a result only one Camden engine now works to Wolverhampton, on the 8.50 a.m. (SX) down and 1.55 p.m. (SX) up. The other Camden working, the 6.24 a.m. ex-Watford and 3.55 p.m. (SX) or 4.5 p.m. (SO), and the Sunday turn, are operated by Bushbury locomotives. By a rearrangement of the return Bushbury workings, the Camden engine required for 3.0 p.m. to Northampton and 5.40 p.m. Northampton to Birmingham and its return working, the 10.48 p.m. parcels ex-New Street, is cut out, as the Bushbury engine off the 7.50 a.m. ex-Wolverhampton covers this working before returning to Wolverhampton on the 9.0 a.m. ex-Euston on the following day. This means that the engine off the up "Midlander," which formerly waited overnight for the 9.0 a.m., now returns with the down "Midlander" at 5.50 p.m. [R. W. Beaton.]

At the end of September both dual-fitted "Britannias" reappeared on the Midland Division, for on 19 and 26/9/54 Nos. 70043/4 were observed at Melton Mowbray heading a southbound fitted coal train of 70 wagons and 1,550 tons weight, including a brake test vehicle, from Toton. No. 70043 worked a 50-wagon train with dual-fitted "5MT" No. 73030 on 22/9/54. The Fell diesel-mechanical 2-B-B-2 No. 10100 was seen moving about outside Derby works on 21/10/54; it looked in a somewhat neglected condition externally. An interesting visitor to Coalville on the afternoon of 21/10/54 was new 2-10-0 No. 92016 (15A), which was at work in the sidings; at about 4 p.m. it left tender-first with a brake-van in the direction of Burton. This engine and No. 92015 are new allocations to Wellingborough. No. 92018 was noted at Coalville on 29/10/54. [P. Webb, B.Pratt, R. Hemsley, R. Kightley.]

An interesting combination seen heading a transfer freight from Neville Hill to Copley Hill, Leeds, on 9/10/54, was that of "Q6" 0-8-0 No. 63348 (50B) and 2-8-0 No. 48255 (5B). Some extremely interesting trials were conducted over the Midland Leeds-Carlisle route in October. On 18/10/54 the 10.5 a.m. ex-Edinburgh (Waverley) was hauled throughout to Leeds by "A3" No. 60087 (64B), which lost 30 min.; on 20/10/54 No. 60096 (64B) left Leeds on the 9 a.m. St. Pancras-Edinburgh, returning on the 10.5 a.m. ex-Waverley next day. No. 60096 was again noted on these turns, but on 2/11/54 "Clan" No. 72000 worked the 10.5 a.m. ex-Waverley into Leeds. [J. B. Driver, J. Stephenson.]

On 10/10/54 a Southern "T9" 4-4-0, No. 30729, worked through to Tring with a special Rambler's Excursion from Blackfriars, returning the same day. Polmadie "Britannia" No. 70053 was noted in Euston on the 2.10 p.m. from Liverpool on 5/10/54, while on 27/10/54 "Clan" No. 72005, running in after repair at Camden, took out the 9.35 p.m. to Birmingham, returning to London next morning on a parcels train from Crewe. Two unusual "Duchess" workings noted on 23/10/54 were those of No. 46229 on the 11.45 a.m. Euston-Manchester and of another, number unrecorded, on the up "Irish Mail"; the latter was running very late, and as Holyhead Pacific No. 70049 headed the 10.5 a.m. Northampton-Euston on 26/10/54, it may be that the standard engine had failed on the "Irish Mail" three days earlier. The up "Mid-day Scot" arrived in London on 27/10/54 behind Edge Hill unrebuilt "Patriot" No. 45518, which had regained all of a reported 10 min.-late start from Crewe. The correspondent who suggested that the visit of No. 45677 on 10/8/54 was the first by a Polmadie "Jubilee" to London was in error, for No. 45692 was at Willesden in June, 1952. A Kentish Town "Jubilee," No. 45616, headed the 12.18 p.m. Watford-Rugby and 3.40 p.m. Rugby-Euston on 16/10/54. [D. L. Ford, R. Ratcliffe, R. Kightley.]

Standard "3MT" 2-6-2 tanks Nos. 82020/1, which the S.R. has reported as allocated to Exmouth Junction, the L.M.R. now states to be at Nuneaton; both these engines have recently been on trial at Hull. Wellington (Salop) still receives its daily quota of "foreigners," ranging from "Britannias" to "7P" 4-6-0s, 4-4-0s and 2-6-4 tanks, on the Shrewsbury-Stafford trains which are Crewe North running-in turns; these are the 3.10 and 5.50 p.m. from Shrewsbury and the 3.42 and 6.22 p.m. from Stafford. [J. B. Harrison, R. Bradshaw.]

"Britannia" No. 70048 visited Blackpool on 6/10/54 with an Illuminations excursion from Holyhead; other engines of this class noted running in on North Wales coast turns during late September and October were Nos. 70007/11/35/6/8/54. No. 70038 was also seen at Carlisle, where engines of this type running in from Crewe often appear on a Sunday, on 3/10/54. New "2MT" 2-6-0s Nos. 78032-4 have been allocated to Rhyl. [J. R. Martin, R. E. Hughes, G. Roberts, E. Sharples.]

On 9/10/54 0-8-0 No. 49278 worked the 7.5 a.m. passenger from Whitchurch into Chester; the 0-8-0 had been commandeered from a goods after 2-6-4 tank No. 42425 had failed at Tattenhall. Possibly this occurrence had something to do with the uncommon appearance of a "Jubilee," No. 45661, on the 12.40 p.m. (SO) Chester-Whitchurch later in the day. [H. G. Dibdin.]

What is believed to be the first visit of a Pacific to Workington occurred on 20/10/54. On 19/10/54 No. 70005 (30A), running in from Crewe, worked the 8.10 a.m. Windermere-Manchester and 3.53 p.m. Manchester-Barrow, and next day travelled north from Barrow at 6.55 a.m. with the Whitehaven portion of the 11.5 p.m. from Euston, returning on the 10.50 a.m. from Workington. Incidentally, the diagram of the Crewe North engine working the 3.53 p.m. ex-Manchester is not quite as stated in the November issue. It begins with an evening train to Windermere and the next morning's 8.10 a.m. Windermere-Manchester; the engine then works the 3.53 p.m. ex-Manchester and pilots the next day's 1 p.m. back from Barrow as far as Lancaster, returning to Crewe on the 2.30 p.m. from Morecambe (Euston Road). The engine working the Saturday 3.53 p.m. from Manchester deals with the Sunday

6.27 a.m. Barrow-Preston, returning to Barrow on the 2.40 p.m. from Preston to resume its normal weekday diagram next day. By mid-October the new Polmadie "Britannias," Nos. 70050-4, had all but completely ousted the "Clans" from Manchester and Liverpool-Glasgow workings, with great benefit to the time-keeping of the trains concerned. Lancaster shed has received a standard "2MT" 2-6-0, No. 78031. [N. C. Lister, A. Mayor, R. Verity, R. M. Montgomery, E. V. Messenger, J. Phillips.]

It is reported that Bacup and Plodder Lane sheds were closed after the first week of October; Bacup's stud of engines has been transferred to Bury, and most of those at Plodder Lane to Patricroft, although standard 2-6-2 tank No. 84004 has gone to Rhyl's sub-shed at Denbigh in exchange for No. 41287, transferred to Patricroft. On 23/10/54 Rugby "5MT" No. 44713 took the place of the usual Huddersfield engine on the 4.18 p.m. Manchester (Exchange)-Wigan (N.W.) local and was soon followed through Patricroft by No. 45089 of Willesden on a Stockport-Blackpool illuminations special. ["Nelsonian," C. Golding, A. Martin, R. Morris.]

Some interesting movements were involved in the Royal visit to Lancashire in October. The Royal Train left Euston on the evening of 20/10/54 and was stabled at Lowton (Manchester Curve), where a specially polished Patricroft 0-8-0, No. 49082, was in attendance to assist in shunting the train in the Lowton area during the next two days. On 21/10/54 the Queen visited Wigan and rejoined the Royal train at Liverpool (Lime Street), where it had arrived empty, for the journey back to Lowton. Next morning the train conveyed the Queen from Lowton to Bolton (Trinity Street); headed by "Jubilees" Nos. 45571/84, it took the electrified Bury (Bolton Street) line from Manchester to Radcliffe and then travelled the Radcliffe (Central)-Bolton (Trinity Street) line, from which regular passenger trains have been withdrawn for some time. The train was next worked empty to Rochdale, where the Queen entrained for the last time on this tour; the two "Jubilees" headed it back via Newton Heath Junction to Crewe, where a Pacific took over for the final stage of the return to London. [F. Minshull, "Nelsonian."]

New "5MT" 4-6-0 No. 73065 was observed at Worcester on 24/10/54 and is reported to be paired with a high-sided tender of similar style to those on the latest "7MT" Pacifics, the 4,725-gallon type "BRIE." [D. I. Ramsay].

EASTERN REGION

A NEW arrival at King's Cross shed for trials is Ivatt Class "2MT" 2-6-0 No. 46482; two of the Class "DMSI" diesel shunters have also been allocated to King's Cross, No. 11114 new and No. 11108 from Parkeston. Scottish "A4" No. 60004 worked into King's Cross with the Sunday through train from Glasgow on 10/10/54. Two "O2s" were noted farther south than is usual these days; on 13/10/54 No. 63984 (36A) brought a coal train from New England into Letchworth, and three days later No. 63944 (36A) headed a similar load from New England to Hatfield. Unusual power on the 8.21 p.m. King's Cross-Cambridge as far as Hitchin on 12/10/54 was "J6" 0-6-0 No. 64186, while "J1" No. 65013 performed the same task the next night. Hitchin was very short of power at this time and No. 64186 was specially fitted for steam heating to work King's Cross outer suburban trains; it was noted on other turns of this sort during the month, as was No. 65013, which normally works freight and ballast trains during the week and the R.A.F. Henlow leave train at weekends. A "B16" was in the south on 15/10/54, when No. 61421 took out the 7.37 p.m. Welwyn-Colwick freight. "D16" No. 62571 (31A) arrived at King's Cross on a Hitchin duty on 22/10/54 owing to the failure of a "B1"; four days later another Hitchin "B1," No. 61027, rolled into King's Cross on the "Queen of Scots" after "A1" No. 60139 had failed at Hitchin. [M. B. Dean, R. N. Ball, P. J. Lynch, S. Fox.]

There is no foundation for the rumour that "K3" No. 61886 has been rebuilt as a "K5." The most recent "K3" modification was made some nine months ago when No. 61942 was fitted with a hopper and rocker bars, but no further engines have been similarly dealt with. Nor do reports agree as to the steaming qualities of the new 2-10-0s. The March engines are regularly working 59 loaded wagons and a brake from Whitemoor to Temple Mills, 10 wagons in excess of the maximum load for a "WD" 2-8-0, and 75 empties back; No. 92010 has run some 2,500 miles in a month on such workings. A reader with practical experience of these engines has no complaint other than that the flame scoops keep falling into the fire. The March turntable was out of use in October and a number of Doncaster, Retford and Mexborough "02" and "04" 2-8-0s worked right through to Temple Mills. Acting as goods pilot at Brentwood on 4/10/54 was Eastfield "4MT" 2-6-0 No. 43134. [P. R. Batty, C. H. Swettenham, P. J. Baldwin, C. C. Cock.]

Commencing on 3/10/54 the engineers were given complete possession of the down Southend-Victoria line between Billericay and Wickford for work in connection with the forthcoming electrification. As a result there have been some cuts in the passenger services. There are no down trains between Shenfield and Southend during the morning peak hours or up trains at the similar evening period; the consequent unbalanced engine workings mean that the 12.46 p.m. Shenfield-Southend and 12.50 p.m. Liverpool Street-Southend are double-headed, usually by a pair of "B12s" or "B17s." Another development is that up freight trains are banked between Wickford and Shenfield to avoid a breakaway on the gradient, from which catchpoints have had to be removed for both-ways running; on 10/10/54, a freight was seen making for Southend with three "J20s" in action, of which class—and of "J19s" and "J39s"—an unusual number has invaded the Southend line. As expected, the Wickford-Southminster branch is being worked by push-and-pull units (one is of N.E vehicles labelled Sunderland, the other a transfer from King's Lynn) and the motive power is provided by "F5" 2-4-2 tanks Nos. 67193 and 67218, "C12" 4-4-2 tanks Nos. 67386/7, "N7" 0-6-2 tanks Nos. 69692 and 69708 and—the most interesting novelty—Class "N5" 0-6-2 tank No. 69257; the Tilbury tanks, Nos. 41952/70/5/6, have therefore been stored. [P. J. Lynch, R. J. Bird, J. Plume, R. J. Humphries.]

At Doncaster, the first of a batch of standard 2-6-4 tanks for the Scottish Region, No. 80106, is complete. One of the "S1" 0-8-4 tanks shedded here is still in action. This is No. 69905, which is employed on the menial task of engine haulage between the shed and the works. The four remaining tanks are stored. It is reported that an ex-L.M.S. Garratt appeared in Doncaster station on 15/10/54. [D. J. Haigh, A. Swift.]

A very unusual engine noted at Gorton works in early October was Scottish "Director" No. 62674; these engines are usually shopped in the Scottish Region. [M. Brown.]

NORTH EASTERN REGION

A LIGHTWEIGHT B.R. diesel unit was sent from the West Riding to Newcastle for trials between Newcastle, Sunderland and Saltburn on 20 and 21/10/54. In August a correspondent reported the trial of a "B1" on the 5.10 p.m. Newcastle-Liverpool on 14/6/54; the test was evidently successful, for this winter the train passes Durham hauled by a "B1" almost every day, the most regular performer being No. 61115 (50A). At the beginning of October Immingham "J94" tanks Nos. 68013/33/70 were being overhauled at Gateshead works, where King's Cross "A4" No. 60034 was also discovered with all its motion dismantled. On 24/9/54 "A2" No. 60525 (61B) worked into Newcastle with the up "Night Scotsman." [J. F. Pringle, J. P. Stead, J. M. J. Bruce.]

A Haymarket "B1" worked into West Hartlepool on 9/10/54; No. 61404 was the engine, and the train was believed to be a Newcastle-Thornaby race excursion. An odd piece of economy—superficially at any rate—in this area has been the withdrawal of the 5.45 p.m. West Hartlepool-Northallerton passenger. One or two fish vans used to be attached to it, and these still run as a goods in the same

timings, hauled by "D20" No. 62372 or a Stockton "B1," which returns from Northallerton on freight. Other reported changes in the winter service are the withdrawal of the workman's service to Hartlepool and the closure of Guisborough shed; the latter's "G5" tank, No. 67281, has been transferred to Stockton. The Gateshead "D20s" seem to have been retired to inactivity once again, and it is several weeks since one was last seen on a Newcastle-Middlesbrough express. Thornton "D49" No. 62708 was noted at Bedale, on the Hawes branch, heading a pick-up goods on 16/10/54; it was evidently fresh from overhaul at Darlington works. ["R," J. West.]

The note referring to Nos. 73014 and 42859 on p. 487 of the November issue was incorrect. The two engines were working a return pigeon special from Ripon to the Western Region on 28/8/54, after having brought the train to Ripon the previous day, and spent the night at Starbeck before returning with the empty train. Incidentally, No. 73014 was the first Standard Class "5" to visit Ripon and the first Shrewsbury engine to be seen there (see picture on page 515). [J. W. Hague.]

WESTERN REGION

IT is a pity that few, if any, recorders of locomotive performance travel by the Plymouth-Paddington boat trains in the normal course of events. Scarcely was the ink on No. 5069's performance on 7/10/54 dry in the record books (see November issue, page 453), than it was equalled on 22/10/54 by "Castle" No. 5058. On the latter occasion the feat was more notable as the load was a 7-bogie train of 226 tons tare, equal to that on the pre-war record trip of 13/6/35 (19, not 9 years ago, as an inept mathematician wrote in our November note). No. 5058's passing times on 22/10/54 were: Newton Abbot (32.9 miles), 40 min.; Exeter (53.1 miles), 67 min.; Taunton (83.8 miles), 96 min.; Castle Cary (111.3 miles), 119 min.; Heywood Road (131.8 miles), 137 min.; Reading (190.3 miles), 187 min.; and arrival in Paddington (226.8 miles) was achieved in 217 min. Had the boat special not been checked twice at the approaches to Paddington by a preceding train, a new record might have been established; as it was the 36 miles from Reading to Paddington were reeled off in 30 min. and the post-war best time of 2½ hrs. for the 173.7 miles from Exeter to Paddington was equalled, with the result that the special, which was running on the "Plym B" timing, kept the Paddington authorities in a state of suspense by continually piling up credit time to roll in 45 min. early! There must have been some fine work up to Whiteball to average over a mile a minute from Exeter to Taunton, and even more so up the 1 in 81/98 of Brewham bank, since the 20.5 miles from Castle Cary to Heywood Road took only 18 min.

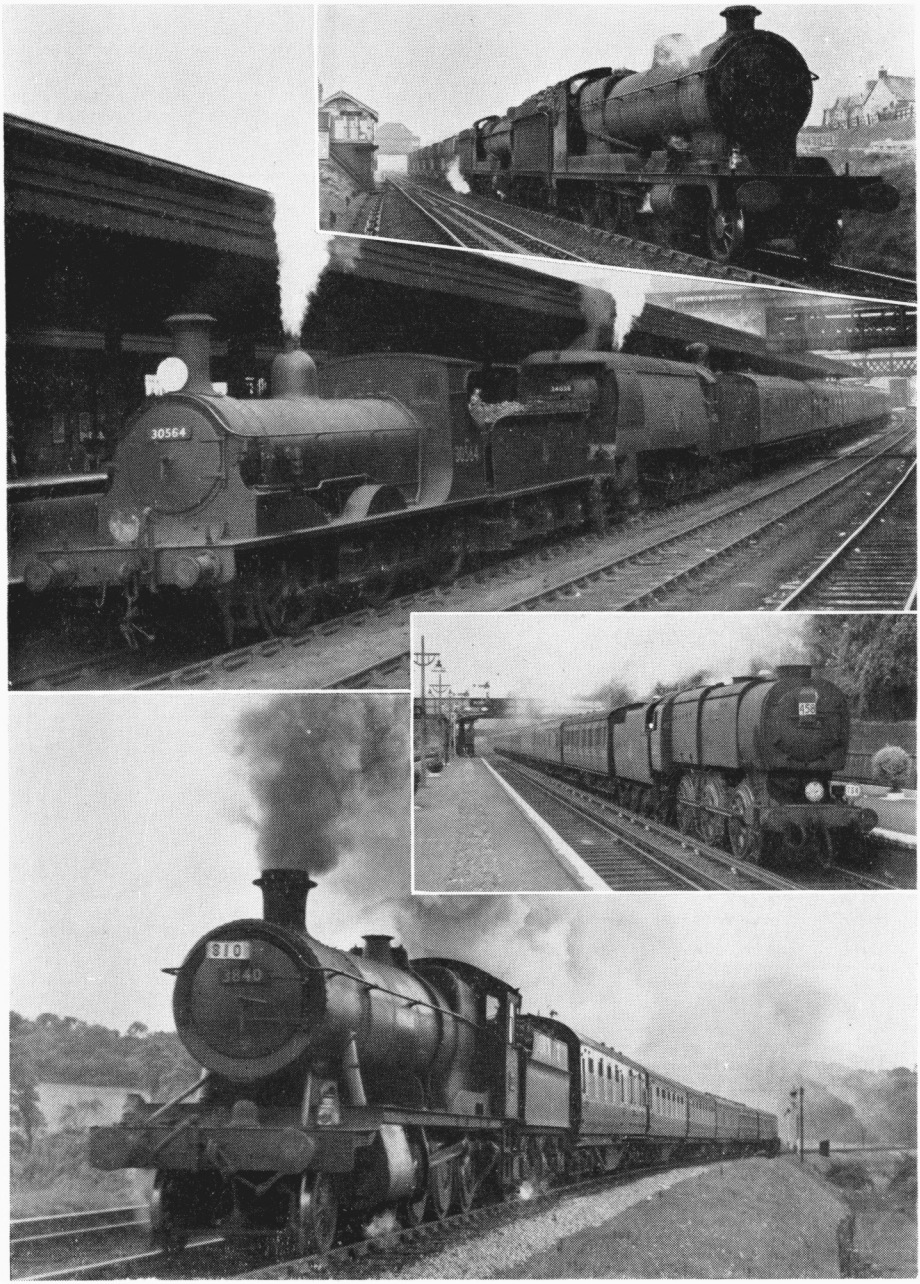
During early October Laira "4MT" 4-6-0s Nos. 75027/9 were working from Reading shed, and the former made several appearances at Paddington. Gas turbine No. 18000 seems to be in trouble again. After inconsistent appearances on the diagram described last month, it brought the 6.30 p.m. arrival from Swindon into Paddington 23 min. late on 24/9/54 with 2-6-2 tank No. 6150, attached at Slough, coupled ahead of it; No. 18000 was next observed on 16/10/54 making its way dead to Swindon behind a 2-6-0, and it was still at Swindon at the end of the month. On 2/10/54 "King" No. 6000 was removed from the 9.5 a.m. Paddington-Bristol at Reading and spent the rest of the day there as station pilot. Another "King," No. 6013, failed at Didcot with the down "Bristolian" on 22/10/54 and was replaced by "Castle" No. 7023, commandeered from a Didcot-Swindon local; the "Castle" also worked the up "Bristolian" that day. (A third "King" failure was reported on 6/10/54, when No. 6027 came off the 4.10 p.m. Plymouth-Paddington at Taunton and was relieved by "Castle" No. 4088, which lost a further 24 min. to Paddington, reached 56 min. late; this was an unlucky day for the reader who reports this—he had already suffered two failures between London and Newton Abbot on the 9.30 a.m. Paddington-Plymouth in the morning!) In the first week of October "Kings" were working the 9.5 and 7.30 a.m. Paddington-Bristol, usually "Castle"-hauled, while by contrast there was an unusual number of "Counties" instead of "Kings" on West of England trains in October. "Star" No. 4062 (82C) made several trips to London in October, being observed on the 12.35 p.m. arrival from Taunton and Cheltenham and the 5.14 p.m. departure for Bristol, and No. 4056 headed the 7.45 a.m. Hereford-Paddington on 25/10/54. "Castle" No. 5058 (83D) headed the up "Cornish Riviera Express" on 25/10/54. [B. Bernard, G. F. Lovett, J. M. Craig, J. P. Andrew, B. A. Knock.]

Owing to engineering work at Lavington on the first two Sundays of October, West of England services were diverted. Among them, the Saturday 11.40 p.m. and Monday 12.30 a.m. newspaper trains from Paddington ran via Devizes, as did the 10.10 a.m., and 2 p.m. and 4.10 p.m. Plymouth-Paddington passenger; the up trains were provided with an assistant engine between Westbury and Patney & Chirton. The 10.30 a.m. and 1.30 p.m. Paddington-Plymouth travelled via Swindon and Bristol, but the 3.30 and 5 p.m. were routed via Swindon and Melksham; this diversion presumably accounted for an observation of Pacific No. 70021 on the down "Limited," instead of the usual "King," on 10/10/54. The 5.40 p.m. Penzance-Kensington milk travelled Southern from Exeter to London.

"Castle" No. 4096 is paired with a self-weighing tender; for three weeks up to 15/10/54 it was in regular service on the 7.30 a.m. Penzance-Manchester between Newton Abbot and Bristol, and the 6.25 a.m. Bristol-Plymouth. A report that Pacific No. 70020 failed at Wellington with the 12.5 p.m. ex-Paddington on 21/8/54 was incorrect; an Exeter correspondent saw the train arrive there that day with No. 70020 safe and sound, while its alleged relief, No. 5991, appeared on the 1.25 p.m. from Paddington. An odd incident was witnessed on Dainton bank on 2/10/54. As the 12 noon Penzance-Manchester, loaded to 11 bogies, approached the summit, the train engine, "County" No. 1010, lost its feet in violent slipping, despite perfect weather conditions, and its weight combined with that of the train was more than the pilot, "Hall" No. 4940, could manage. After a lineside conference, both engine crews remounted and, apart from a slight slip by the "County," made a perfect and confident re-start! [W. Monckton-Philpott, C. A. W. Slade, P. K. Tunks.]

The last three Cambrian 0-6-0s, Nos. 849/55/95, had all arrived at Swindon for scrap by 17/10/54. On this date, frames were laid for the first of a new batch of pannier tanks, No. 1650, and 2-6-2 tanks Nos. 82023-6 were nearing completion; "King" No. 6015, fresh from "Bristolian" work, was awaiting repair. A Southern "King Arthur" appeared at Bristol on 11/9/54, when No. 30788 worked to Ashton Gate with a football excursion from Eastleigh. The Class "8P" Pacific, No. 71000, worked through Wellington (Salop) in the direction of Wolverhampton on 27/10/54 and was evidently on its way to Swindon, where we noted it outside the works on 30/10/54. [A. W. Martin, S. D. Church, T. H. A. Townsend.]

Except on occasional summer workings, the "4700" 2-8-0s are generally night birds, so that photographers especially will be glad to learn that engines of this type are regularly working the 12.50 p.m. Old Oak Common-Birkenhead Class "C" freight from London to the Midlands. There is a regular working of a Newton Abbot district engine through Leamington on the 9 p.m. Exeter-Crewe freight; on 16/10/54 this produced "4MT" 4-6-0 No. 75028. A recent recruit to Leamington is parcels railcar No. W17, which forms the 6 a.m. Leamington-Birmingham (Snow Hill) parcels and, after a tour of the Midlands, regains Leamington at 9.45 p.m. On 21/10/54 the 4.30 p.m. Westbury-Oxley freight was worked through Leamington by "4MT" 4-6-0 No. 75003 (82C). Stafford Road shed appeared to be hard put to find "Kings" for its best London jobs in late September and early October. The 6.10 p.m. down was frequently "Castle"-hauled, while Old Oak "Castles" were noted on the up "Inter-City" and 5.10 p.m. from Paddington. At the beginning of October Old Oak



FOR THE RECORD

Inset top : A rare combination of two Class "O4" 2-8-0s, Nos. 63681 and 63575, photographed at Upton, on the ex-L.N.E. Bidston branch, with an iron ore train from Bidston to John Summers' ironworks at Shotton. (18/9/54). [*R. J. Morris*

Upper : Strange companions photographed at Exeter (St. David's) on the up Ilfracombe "Atlantic Coast Express"—Class "0395" 0-6-0 No. 30564 and light Pacific No. 34056 *Croydon* (4/9/54). [*J. F. Oxley*

Inset centre : The S.R. Class "Q1" 0-6-0s are usually strangers to passenger work ; here No. 33037 passes South Croydon on the post-war equivalent of the "Sunny South Express." (21/8/54). [*R. Russell*

Below : A W.R. "28XX" Class 2-8-0 on express passenger work : No. 3840 climbs Dainton bank with the 7 a.m. Birmingham (Snow Hill)—Penzance. (2/8/54). [*G. R. Wheeler*

"King" No. 6001 appeared to be on loan to Stafford Road. ["Mounts Bay," P. B. Hammond.]

Cambrian 0-6-0s visited the Midlands for the last time in October; on 10/10/54 No. 895 (89A) passed through Stourbridge Junction at midday on an Oswestry-Blockley vacuum-fitted ballast train, and on 14/10/54 No. 855 (89A) was noted at Leamington on its way to Swindon. An unusual combination seen at Stourbridge Junction on 25/9/54 was that of a "Crab" 2-6-0 and a "Grange"; No. 42957 (3D) was working a Bewdley-Hednesford excursion, and took on No. 6823 (84F) as pilot at Stourbridge Junction. [E. J. Dew.]

In mid-September ex-Taff Vale 0-6-2 tank No. 205 arrived at Oxford shed. It remained there until 3/10/54, when it set off for Worcester and Shrewsbury on its way to Oswestry, where it was noted on 14/10/54. This tank, recently condemned, travelled on to Moat Lane to act as a temporary pumping engine there. Noted at Wellington (Salop) on the 3.20 p.m. Birkenhead-Old Oak Common meat train on 25 and 26/10/54 was "Grange" No. 6817 (83G), while on 27/10/54 No. 6848 (83A) passed on an early morning down freight. [A. Mullery, D Morris, J. Strange, R. C. Griffiths, J. B. Harrison.]

Recent transfers to Oxford have been "4MT" 4-6-0s Nos. 75001/4. These engines have been working passenger turns to Worcester and Hereford, and have also been sharing an interesting night freight working which takes them through Birmingham (New Street) in the late evening; this is a weekday trip with motorcar bodies at 6.55 p.m. from Oxford via Bordesley Junction to Longbridge, where the train is due to arrive shortly after 11 p.m., and thence back to Oxford an hour later with empty stock. Other regular standard visitors to Worcester are "5MTs" Nos. 73025/6, recently transferred to Cardiff (Canton), which frequently work through on mineral trains, while Nos. 75002 and 73022 of Swindon were on shed on 24/10/54 after working a crane special in from Swindon for bridge renewal work; on this date ex-T.V. 0-6-2 tank No. 373 (88C) was on Worcester shed after overhaul at Swindon. A Stafford Road 4-6-0, usually a "Hall" or "Castle," has been working through Worcester (Foregate Street) to Henwick on the 6.50 a.m. from Wolverhampton since the beginning of the winter services; it returns on the 9.35 a.m. from Worcester (S.H.). On 6/10/54 pannier tank No. 3728 headed the 4.5 p.m. Hereford-Brecon instead of the usual "2MT" 2-6-0, as services were being terminated at Hay-on-Wye owing to bridge renewal at Glasbury. [D. I. Ramsay, J. Benson.]

SOUTHERN REGION

THE all-Pullman special conveying the Emperor of Ethiopia from Portsmouth & Southsea to Victoria on 14/10/54 was hauled throughout by Pacific No. 34088. To enable it to arrive at Platform 2 on the Eastern side of the London terminus the train travelled via Havant, Guildford, Effingham Junction, Leatherhead, Sutton, Mitcham Junction, Tulse Hill and Herne Hill. A trial run with the same engine was carried out on 17/9/54. The Emperor was met at Portsmouth by the Duke of Gloucester, who travelled down from Waterloo in "5-BEL" electric unit No. 3052. Nine Elms Pacific No. 35012 worked the 12.30 p.m. Victoria-Dover boat train on 28/10/54 and the 9.20 a.m. Dover Priory-Victoria on 30/10/54. [P. S. Hooper.]

The motive power depots at Fratton, Newport and Ryde have been transferred from the Eastleigh to the Nine Elms district and recoded 70F, 70G and 70H respectively; by mid-October many island engines were observed with their new shedplates.

The "G16" 4-8-0 tanks Nos. 30494/5 were withdrawn from Feltham at the beginning of October and put into store at Guildford; however, on 6/10/54, both were observed on the Longmoor Military Railway, where they were being used for bridge tests. At Feltham, sister engine No. 30493 was in action again on 18/10/54. [S. J. Cormack, N. Weller, J. Draper.]

SCOTTISH REGION

"B1s" have been making frequent appearances at Buchanan Street, Glasgow, on the 7.15 a.m. to Dundee, whence they return on the 11.35 a.m. The engines concerned are usually from Eastfield shed. [R. M. Hicks.]

On 21/10/54 a coloured plaque depicting a kingfisher in flight was unveiled on "A4" No. 60024 at Haymarket depot. The plaque was made by an officer at the R.N. Air Station at Donibristle, which was also responsible for the plaque affixed to No. 60027.

On 2/10/54 "V4" 2-6-2 No. 61701 worked right through to Elgin with the 3.40 p.m. from Aberdeen; this is the first time it has been so far north since it

LOCOMOTIVE STOCK CHANGES

"N.Y.A." denotes "not yet allocated" (on official lists received). The list is correct to the following dates: E. & N.E.R. 23/10/54; L.M.R. 9/10/54; W.R. 14/8/54; Sc.R. 2/10/54.

NEW ENGINES

Diesel Mechical 0-6-0: 11113-30F; 11114-34A; **Diesel Electric 0-6-0**: 13082-21A; 13083/4-16A; **Class "7MT" 4-6-2**: 70054-66A; **Class "5MT" 4-6-0**: 73062/3/4-66A; **Class "2MT" 2-6-0**: 78031-11E; 78032/3/4-6K; **Class "4MT" 2-6-4T**: 80092-14B; **Class "9F" 2-10-0**: 92015/6-15A.

ENGINES CONDEMNED

58, 2112, 40395, 40436, 40662, 41054, 41133/4/9/41, 41711, 48893, 50621, 51375, 51460, 51519, 52174, 52349, 58290, 58888, 58900/15/24, 62358/71/4/80, 64339, 65490, 65661/7/71, 67422/56/76/7, 68799, 69231, 69770.

ENGINES REALLOCATED

1454-82A; 2235-89B; 2286-89C; 2824-81D; 2846-83A; 3014-87G; 3768-87E; 4087-83D; 4145-83A; 4562-82A; 4926-84A; 4941/52-87F; 4965-87E; 5074-86C; 5089-87E; 5793-88A; 5902-87F; 5903-87H; 5923-86C; 6439-86A; 6975-84A; 6996-83B; 7017-81A; 7749-82F; 8447-86C; 8465/9-88B; 9312-84A; 9461-86C; 11108-34A; 11111-31B; 12046-9D; 12048-18A; 12132-36B; 40003-2C; 40102-6C; 40114-20E; 40118-3E; 40411-16A; 40655/92-12A; 40915-67B; 41059-15D; 41067-20E; 41189-27A; 41229-5A; 41287-10C; 41875-18C; 41901-5A; 42133-14C; 42233-5D; 42453-10C; 42625-24E; 42651-26A; 42688/90-66D; 42902-17D; 42903-21A; 42912-67D; 42963-5A; 43344, 43444-22A; 43598-17A; 43781-19A; 43829-15D; 43837, 43932/89-21B; 44182-15C; 44237/61-8B; 44249-18D; 44354-1A; 44356-8B; 44384-9F; 44404-18D; 44473-1A; 44793-64D; 44794-61B; 45061/77-27C; 45132-9E; 45146-9A; 45164-63A; 45231/92-2E; 45247-6B; 45264-17A; 45302/85-5B; 45367-63A; 45505/19-9A; 45528-5A; 45543-12A; 45634-1A; 45691/6-68A; 45719-24E; 45736, 46101/18/9/27/8/59/63/6/7-5A; 46116/26/41-12A; 46132/57, 46200/6/28/51-8A; 46248-5A; 46412/39-27B; 46413-27A; 46422-8D; 46428-10A; 46430-10B; 47401-10C; 47623-20B; 47636-19A; 47997-18A; 48139-16C; 48147-2E; 48154-2B; 48395-16C; 48396-20A; 48423-2E; 48742-9G; 48749-6B; 49034-10C; 49120-2B; 49144-10A; 49147/9-10C; 49203-10A; 49266-8C; 49281-10E; 49315-10A; 49637/8-27D; 50646-20C; 50712-27C; 50757-25E; 50831-25B; 52270-10E; 52366-10A; 58077-16A; 58221-11B; 60047/61-35B; 61311-40A; 61312-32A; 61355-64B; 61742-40B; 61801/15-30A; 61829/48, 61950-40A; 62360/75/96-52D; 62710-53D; 64403-36E; 64712-40D; 64725/30-50C; 64741-40A; 64810/90-30A; 64817-51J; 64850, 64904/22-50C; 64910/78-51J; 64916-52B; 64973-30A; 65088, 65103-52C; 65167, 65209-9E; 65532/89-31E; 65706-52F; 65712-54C; 65793, 65857-50A; 65892-52B; 67218-30A; 67221/7-31C; 67265-52A; 67281-51E; 67323/39-52F; 67338-51C; 67386-30A; 67438-37B; 67639-52C; 67704-32C; 68151-53A; 68429-50C; 68496-35A; 68555-31D; 68625-31E; 68819-34D; 69257-30A; 69348-39B; 69691/4/5/6-37B; 69692, 69708-30A; 69771/8/81-53C; 69813-40B; 69830/4/9/41-51A; 69852/66-51K; 69858/82-50B; 69889/91-51D; 82020/1-2B; 84004-6E; 84012-26F; 90584/99-27D.

ENGINES RECLASSIFIED

V1 to V3: 67653/4.

was transferred to this area recently. "B1s" Nos. 61349 and 61400 worked the Royal Train from Ballater to Aberdeen on 9/10/54; at Aberdeen "5MTs" Nos. 44797 and 45496 took over and worked the train to Perth. On 9/10/54 "The Saint Mungo" (5 p.m. ex-Buchanan Street) arrived in Aberdeen 20 min. late behind standard "4MT" 2-6-0 No. 76002 (66B), probably because there had been a failure farther south. Two of the standard "5MTs" which are allocated to Polmadie were at Aberdeen recently, both hauling the 6.55 p.m. Manchester fish out of Aberdeen; the first was No. 73059 on 12/10/54 and the other No. 73056 on 22/10/54. On 2/10/54 "Jubilee" No. 45692 (63A) worked the 7.30 p.m. Waverley route Carlisle goods from Aberdeen to Dundee as there was no ex-L.N.E.R. engine available for the job. Ferryhill is not to receive four "5MT" 4-6-0s as forecast last month. No. 45367, which was officially transferred to Ferryhill last month, has been reallocated to Perth, and Ferryhill depot has retained only Nos. 44794 and 45162. [D. W. Smith.]

The 10.40 a.m. Glasgow-Manchester takes the ex-L.N.E. route to Edinburgh, headed by "Jubilee" 4-6-0 No. 45661 *Vernon*. Photographed at Manuel. (30/10/54). [*W. J. V. Anderson*

THE "ROYAL SCOT" AT NEWCASTLE

THE West Coast route between Carlisle and Glasgow was twice cut by floods and landslides in October. On 18/10/54 Haymarket "A2" and "A3" Pacifics were mostly used for trains diverted to the Waverley route (some took the ex-G. & S.W. lines), but Haymarket "A4" No. 60031 was noted on the 10.15 p.m. Edinburgh-Carlisle parcels and the next day's 4.8 a.m. Carlisle-Edinburgh postal. Next morning the West Coast route was restored, but in the afternoon the most interesting strangers appeared on the Waverley route, standard "5MT" No. 73058 (66A) on the 12.5 p.m. Edinburgh-Carlisle and Pacific No. 70052 (66A) running light into Carlisle.

Both ex-L.M.S. lines between Carlisle and Glasgow were blocked on 29/10/54 and some through traffic was diverted to the Waverley route, most of it worked by "5MT" 4-6-0s. However, the up "Royal Scot" rolled into Carlisle at 3.15 p.m. (it reached London 5 hrs. late) headed by "A3" No. 60100 (64B), and later a "Princess Royal" Pacific was seen from a distance heading what was probably the 11.25 a.m. Birmingham-Glasgow on to the Waverley route, while Pacific No. 70052 brought up a Glasgow-Manchester express. The 12.20 a.m. ex-Euston had to be reversed at Beattock and brought back to Carlisle; it eventually reached Glasgow 7 hr. 16 min. late. The 9.20 a.m. and 9.5 p.m. Glasgow (St. Enoch)-St. Pancras, the 10 a.m. and 9.15 p.m. in the reverse direction, and the 10.20 and 10.25 p.m. Glasgow (Central)-Euston, however, were diverted via Edinburgh (Waverley), Newcastle, York and Leeds (City), the West Coast Route trains proceeding on via Leicester and Market Harborough to Northampton. The 9.20 a.m. was worked out of St. Enoch by "A2" No. 60535.

Saturday, 30/10/54, was the great day. Visitors to Newcastle Central saw Pacifics Nos. 46230/2, which had arrived with the night trains from Glasgow Central and been relieved by N.E.R. engines, returning north with freight trains, No. 46232 on the 10 p.m. Thames Wharf-Niddrie Class "C," No. 46230 on the 2.30 p.m. King's Cross-Niddrie; "Jubilee" No. 45729 returned light after working a Garelochheed-Portsmouth special to Newcastle. Not only was this the first time ex-L.M.S. Pacifics had been seen at Newcastle, but it was probably the first occasion on which they had been relegated to such menial balancing workings!

Later that Saturday, in the afternoon, the up "Royal Scot" appeared behind No. 46221, which had worked throughout from Glasgow; this train was taken on by a "V2" to Leeds, reached at 4.45 p.m. The down "Thames-Clyde Express" arrived in Newcastle behind "Royal Scot" No. 46108, but the down "Royal Scot" took the Waverley route behind Pacific No. 46227. The Waverley Route appears to have been followed by most other diverted expresses that day. An observer an Manuel, on the ex-L.N.E. Glasgow-Edinburgh line, saw the 9 a.m. Perth-Euston double-headed by "Clan" No. 72003 and "5MT" No. 45118, the 10.5 a.m. Glasgow-Birmingham with Pacific No. 46210 and the 10.40 a.m. Glasgow-Manchester (see illustration) pass by towards Edinburgh, on their way to Carlisle, but the up "Midday Scot" left Glasgow for Newcastle and Leeds behind "V2" No. 60840. Other strangers in Glasgow that day were "A2" No. 60507, "A3" No. 60100 and "D11" No. 62681, all noted on Polmadie shed. [J. Stephenson, N. Reay, D. Fraser, R. Forster, J. Campbell, P. D. Johnston and K. Hobinson.]

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EDITOR'S NOTE

We regret that owing to pressure on space we have been compelled to omit details of Locospotters' Fixtures this month ; also to omit the reports of one or two societies from our Society Column ; and to hold over until January the next instalment of Mr. McGowan Gradon's article on the Furness Railway.

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Announcements made in this column in future cost only 4d. per word and will be read by upwards of 25,000 people ; a response is practically guaranteed. Insertion, which must be prepaid, to be addressed to "T.I." Small Ads. Craven House, Hampton Court, Surrey, by 28th of the month.

THE BACK NUMBER SPECIALIST—Lens of Sutton, 50 Carshalton Road, Sutton, Surrey. "Trains Illustrated," Vol. 1 to date, 1/6 each. "Buses Illustrated," Vol. 1 to date, 1/6 each ; 9 to date, 2/6 each. "Railway Magazines" before 1942, 2/- each ; 1942 to date, 1/6 each. "Railways" and "Railway Worlds," 1/- each. "Model Railway News," "Model Railway Constructor," "Model Engineer," "Every Spotters Weekly," all 6d. each. "Railway Modellers," 1/6 each. Glossy P.C.s of Buses, Trams and Locos 6d. each. Call or write.

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"THE LOCOMOTIVES OF THE GREAT WESTERN RAILWAY"—Part 7, Dean's Larger Tender Engines, has just been published and covers in detail the "3,000" bogie singles, Dukes, Bulldogs. Flowers, Cities, Aberdares, etc. Over 100 illustrations, Price 8/6 post free from R.C.T.S. Hon. Publications Officer, D.H. Wakeley, 18 Holland Avenue, Cheam Surrey.

FOR SALE. "Railway Magazines" July, 1946-June, 1953, complete. "Railways" 1947-49 complete. Excellent condition. Best offer secures. Slaughter, 2 Chase Hill, Enfield, Middx.

TRAINS ILLUSTRATED May, 1946-June, 1952. Two copies lack one photo. Offers—David Morris, 8 Holly Gardens, Gateshead, 9.

REPORT OF Unofficial Traffic Survey Westerleigh to Cardiff. 9d. post free. Burrell, 80 Longmead Avenue, Bristol 7.

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LOCOMOTIVE CLUB OF GREAT BRITAIN invites membership for 1955. 7/6 subscription, Details from : Mr. Richens, 17 Alexandra Avenue, Gillingham, Kent.

EDITOR'S NOTE

We regret that owing to pressure on space we have been compelled to omit details of Locospotters' Fixtures this month ; also to omit the reports of one or two societies from our Society Column ; and to hold over until January the next instalment of Mr. McGowan Gradon's article on the Furness Railway.

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